A Lecture
ON
HEAD-NODDING WITH NYSTAGMUS IN INFANCY.

Delivered at the Hospital for Sick Children, Great Ormond-street, London, W.C.,

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GENTLEMEN,—Under various names, such as "spasmus nutans," "head-nodding of infants," and "head-shaking with nystagmus," there has been described a curious and somewhat uncommon disorder which is worthy of attention, if only on account of the unnecessary anxiety which it arouses in the minds of those unfamiliar with its occurrence. The earliest published record of which I am aware is one by Ebert in 1850, but it was not until the late Dr. W. B. Hadden of this hospital published his series of observations in 1890 that the disorder became generally recognised. 31 cases of this affection have come under my own observation; 19 of the patients were boys and 11 were girls (the sex was not noted in one case); this disproportion, however, may be accidental, for in a series recorded by Dr. J. Thomson[1] there were 15 boys and 20 girls. The disorder is almost limited to infancy—i.e., the first two years of life, although, as I shall point out, in rare cases it lasts beyond this limit. In 22 out of 28 cases in which the age at onset could be determined the disorder began between the ages of five months and 12 months; of four which began earlier only one was said to have begun as early as the age of three months, and two began after the first year, both before the age of 14 months.

Sketched in outline the clinical picture is somewhat as follows. As the child sits on his mother's lap there is, perhaps, nothing abnormal to be seen for a minute or two, then as the child fixes his gaze on some object the head begins to nod at the rate of about eight or ten nods within five seconds, after which there is a pause of varying length, and so with irregular intervals short series of noddings occur more or less frequently so long as the child is in the sitting position. Hardly less striking than this rhythmic unsteadiness of the head is the curious way the child has of looking at objects out of the corner of his eyes with the head slightly averted and the face turned slightly downwards, reminding one of the behaviour of the Beaver in "The Hunting of the Snark," for, as you may remember,—

> "Whenever the butcher was by,
> The Beaver kept looking the opposite way
> And appeared unaccountably shy."

The other feature which attracts attention is the exceedingly fine rapid nystagmus which is peculiar in being so much more marked in one eye than in the other, that it may appear to be actually limited to one eye, a point which the mother herself has usually noticed. These three symptoms, the head-nodding, the tendency to look out of the corner of the eyes, and the nystagmus, constitute the characteristic features of spasmus nutans which I shall now consider in more detail.

SYMPTOMS.

The rhythmic movement of the head is not necessarily an antero-posterior affirmative nod as the term "head-nodding" might seem to imply; indeed, so far as my own observations go, a lateral shake of the head as in negation would appear to be a commoner movement. Sometimes also the movements vary, being at one time antero-posterior, at another negation, whilst more rarely there is a simultaneous combination of the lateral and antero-posterior movements producing a sort of pendulum movement. In 22 cases I have noted the variety of movement: 11 patients showed only lateral rotation (negation); six showed only antero-posterior nodding; four either of these movements at different times; and one the combined pendulum movement. The rate of movement varies from 60 to 120 nods per minute, the series of nods lasts sometimes only for four or five seconds, and sometimes as long as 30 seconds. I have noted in one case three bouts of nodding in six minutes but they may be more frequent or may occur much less often; there is no regularity in the intervals, they depend largely on the child's occupation. I have thought that the nodding occurs chiefly when the child fixes his gaze upon an object in a sort of abstraction but that the movements cease directly the child is aroused to active attention. In some cases I have specially noted that the movements could be stopped by attracting the child's attention. Perhaps there is some variation in this respect, for one mother informed me that the movements were specially noticeable when the child was watching children playing in the street, and another said that her child showed the nodding chiefly when not interested by anything in particular. The head movement occurs only when the child is sitting with the head unsupported; it ceases, therefore, when the child is lying in a cot or leaning the head against the mother's arm. This is a point upon which I would lay some emphasis, for it is of some importance in diagnosis; the condition might easily be overlooked if the child is seen only lying in a cot. Moreover, there is another movement, head-rolling, which must be distinguished from the head movement of spasmus nutans and which occurs chiefly when the child is lying down. The range and vigour of the movements vary considerably in different cases and in the same case at different times; in some they are so slight as to be easily overlooked while in others they are obvious to all. Twice I have seen the antero-posterior nodding so forcible as almost to shake the child's bonnet off, but this is, I believe, quite exceptional. But whether the movements be slight or vigorous they are obviously involuntary and in this way differ from the much commoner "head-rolling" which has the appearance of a voluntary movement.

I have already alluded to the occurrence of head-nodding when the infant is sitting gazing at some object in an absent-minded sort of way. And this leads me to remark on the curious tendency of these children with spasmus nutans to fall into an absent-minded stare, a sort of "brown study" which seems hardly natural for an infant. But there is nothing whatever in these moments of abstraction to suggest *petit mal*. The child takes notice directly attention is drawn to sight or sound; there is no change of colour, no tendency to any epileptiform manifestation—in fact, no ground whatever for regarding this peculiarity as due to *petit mal*. I wish to lay great stress upon this point, for it has been stated that children with spasmus nutans show a special liability to *petit mal*. So far as my own observations go I have not seen the least tendency to epilepsy of any sort. Very remarkable is the habit these infants have of looking out of the corner of the eyes while the face is turned in the opposite direction and slightly downwards. So characteristic is this when present—and I think it is present in many cases—that it should at once suggest spasmus nutans. The parents themselves have often noticed it. In one of my cases it was the first complaint that the infant had recently begun to look out of the corners of his eyes "in a funny, coy way," which had made the father, a medical man, fear some serious cerebral disease. I have no explanation to offer for this curious symptom. I have heard it suggested that it is due to an effort to obtain fixation of the eyes which nystagmus renders difficult, but this can hardly be so, for I have seen this sideway gaze very marked in two of the exceptional cases where there was no nystagmus. "Gaze" I say rather than "glance," for during this action perhaps even more than at other times the infant is apt to stare fixedly as if in one of those "brown studies" to which I have referred. This phenomenon may be noticeable several times within five or ten minutes.

The nystagmus which with the head movement constitutes the chief feature of spasmus nutans is characteristic and peculiar in certain respects, and chiefly in two points. 1. Its unilateral predominance. It is almost invariably much more marked in one eye than in the other—indeed, in some cases it appears to be actually unilateral. This unilateral predominance, apart from any unilateral lesion of the media or fundus, is, so far as I am aware, excessively rare apart from this particular disorder. 2. Its onset without apparent cause in an infant a few months old, and its complete disappearance after a few weeks or months. Such temporary nystagmus in infancy without ocular lesion or any evidence of gross cerebral disease is, I believe, almost peculiar to spasmus nutans. The nystagmus differs also from that due to some other conditions in being exceedingly

[1] International Contributions to Medical Literature, Festschrift, May, 1900.

fine and rapid. It may be vertical, horizontal, or rotary, and Dr. Thomson has observed it to be convergent instead of conjugate in some cases. I have seen it to be associated with vertical nystagmus of the upper eyelid but this is unusual. I have not observed the rhythmic contraction of the pupil (hippus) which some writers have recorded; Dr. Thomson noted this in four out of 35 cases.

The onset of nystagmus in spasmus nutans may precede the head-shaking by several weeks or even months. In one of my cases it was stated to have been present three months before the head-nodding began; more often the head movement is the first symptom that attracts attention and the nystagmus may appear later. From this variation in the order of occurrence of these symptoms it might be conjectured that cases would occur in which one or other symptom was lacking altogether and there can be little doubt that not only does the characteristic head-nodding occur sometimes without nystagmus at any period of the disorder, but the nystagmus may be the only manifestation of spasmus nutans, if the affection may be so called when head-shaking is entirely absent. The evidence of this lies in the occurrence in infants of nystagmus which has the characteristic features mentioned above and which shows the same age incidence, seasonal variation, and relation to rickets, and the same temporary character, a duration of weeks or months, as does the nystagmus which is associated with head-nodding. I have included in my series of 31 cases three in which was shown this nystagmus alone and two in which was shown the characteristic nystagmus associated not with head-nodding but with the much commoner quasi-voluntary movement head-rolling, an association which is perhaps to be regarded as accidental. Of the 26 cases with head-nodding 23 patients showed nystagmus sooner or later (in two of these it was extremely slight and perhaps open to doubt); only two showed no nystagmus at any time.

With this description of the symptoms of spasmus nutans I would mention the case of an infant, aged five months, in whom not only were the antero-posterior noddings of the head unusually marked but there was also some shaking of one arm. These symptoms had lasted for some days when I saw the child and I heard from Dr. C. W. Cooke of Willesden, under whose care the child was, that they passed off soon afterwards without leaving any ill effect. In one other case I have noted some shakiness of the arms and Dr. Thomson mentions this symptom as present in two cases in his series.

ETIOLOGY.

I turn now to the consideration of the etiology of spasmus nutans. Rickets is present in a large proportion of the cases. In 20 out of 25 cases in which I have noted this point the patients showed some degree of rickets but only four showed severe osseous rickets; in most it was particularly noted that the evidence of rickets was definite but slight. The occasional absence of rickets shows that rickets is not an essential factor; moreover, in the rare cases in which the disorder begins at as early an age as two or three months rickets is not likely to have been a causal factor even if it is found later. It is, I think, clear that spasmus nutans does not stand in so close a relation to rickets as do such conditions as laryngismus stridulus, facial irritability, and tetany phenomena which in infancy are almost always associated with well-marked and often severe degrees of rickets. It is, indeed, noteworthy how seldom spasmus nutans keeps company with any of these phenomena, which are so closely associated together that the presence of any one of them raises an expectation of the others and which, like convulsions, are well recognised as expressions of the nervous instability of rickets. In my own series one patient showed facial irritability; in Dr. Thomson's series of 35 cases two showed laryngismus stridulus with or without facial irritability and two others showed facial irritability without laryngismus. As a predisposing cause, however, rickets must be regarded as a frequent factor in the etiology of spasmus nutans.

The relation of this disorder to dentition is specially noteworthy. The onset of spasmus nutans is most commonly between five and 12 months of age, the period when the worry of dentition begins; the affection rarely persists after the end of the second year, the end of the first dentition. Moreover, it was evident in some of my cases that just before the eruption of a tooth the head movements and also the nystagmus were increased, while they at once became less when the tooth was through the gum. My own opinion is entirely in agreement with that of Henoch who regarded the irritation of teeth as the usual exciting cause of spasmus nutans. I think, however, that it is quite likely that other forms of peripheral irritation may also act as exciting causes, and some support is given to this view by the closely comparable phenomenon to which Mr. W. T. Lister has drawn my attention, the occasional production of temporary nystagmus by ear-syringing. Preceding illness or injury would seem to have determined the onset in some of my cases; in one with nystagmus only the nystagmus began three days after an attack of diarrhœa and vomiting; in another it began during convalescence from diphtheria; in two others during convalescence from infantile scurvy; in one case head-nodding began four days after an attack of diarrhœa, in two just after bronchitis, and in one a few hours after a fall on the head. Its occurrence in rickety children and after the exhaustion of various illnesses or the shock of an injury, and its very close relation to dentition and the exacerbations just when a tooth is in process of eruption, all suggest that spasmus nutans is a functional disorder depending upon an acquired or congenital nervous instability with some peripheral irritation as an exciting cause.

The defective-light theory.—Of recent years there has been put forward a theory which is worthy of careful consideration—namely, that spasmus nutans is due to living in ill-lighted dwellings; dimness of light, it is supposed, causes deficient fixation of vision, and, moreover, the infant throws his eyes into an unnatural and strained position in attempting to look towards the window. To this strain upon the ocular muscles is due the nystagmus; the head movements are secondary to the nystagmus. This is the view put forward by Raudnitz.[2] The arguments adduced in its favour are: (1) the fact that infants with spasmus nutans often live in dark dwellings; (2) the rarity or non-existence of the disorder amongst the wealthier and consequently better housed; (3) the onset of the disease nearly always during the dark months of the year; and (4) the analogy with miners' nystagmus, with which there are known to be associated in rare instances some rhythmical swaying movements of trunk and head.

Now I venture to think that in spite of the above apparently strong arguments there are grave difficulties in accepting the defective-light theory.

1. It is quite certain that spasmus nutans may occur in infants living in well-lighted dwellings. I have inquired specially into this point in 27 cases; in four of these I was able to visit the home, in the rest my inquiry was only by careful interrogation not by actual visiting and is therefore less convincing than actual visitation would be. In four cases only did the home appear to be ill lighted and in some of these the child was hardly taken out of doors at all. In 23 out of the 27 cases, including the four which I visited myself, there appeared to be no reason for regarding the room in which the child chiefly lived as ill lighted, and in several cases it was specially noted that the rooms were light and sunny. But in considering the question of light it is obviously necessary to take into account to what extent the child lives indoors. Some of my patients were taken out daily and in one case it was particularly stated that the child was taken out much every day and "in all weathers."

2. The disorder is undoubtedly seen chiefly in hospital practice, but I have seen it in three cases in private practice amongst people in comfortable circumstances and well housed, once in the infant of a medical man whose nursery was an excellently lighted room. It must be remembered also that rickets, which most observers have regarded as a predisposing cause, is commoner amongst the hospital class than amongst the well-to-do.

3. The seasonal incidence of the disease is, indeed, remarkable. In 21 of my cases the onset could be dated with some degree of accuracy: January, 7; February, 5; March, 1; April, 0; May, 0; June, 0; July, 1; August, 0; September, 2; October, 1; November, 1; and December, 3. In six others the date could be determined with less certainty, thus: January, 1; February, 1; March, 3; and November, 1. So that out of 27 cases 17 began within the three months December to February. Only one began during the five months April to August. These figures agree with those collected by Dr. Thomson and addition of his statistics to mine shows that 86 per cent of the cases of spasmus nutans have their onset during the five months November to March. But the special incidence of the disorder in these comparatively dark winter months is not necessarily connected with deficiency of light and I would point out that

[2] Jahrbuch für Kinderheilkunde, Band xiv., p. 145.

laryngismus stridulus, another nervous disorder associated with rickets and one which can hardly be attributed to deficiency of light, has a very similar seasonal incidence; its onset is, it is true, rather more often in March than in January, but according to my own statistics no less than 80 per cent. of the cases have their onset during the five months November to March. It would seem, therefore, that during this season there is some influence apart from deficiency of light favouring the onset of certain nervous disorders in connexion with rickets.

4. The analogy with miners' nystagmus can hardly be said to support very strongly the defective-light theory, for it is the opinion of experts now that such nystagmus is due much less to the bad light than to the strained position of the eyes in this occupation; and nystagmus is known to occur from a similar cause in other occupations in which a strained position of the eyes is usual, although the work is done in broad daylight. Moreover, the miners' nystagmus does not show, so far as I have been able to ascertain, the unilateral predominance which is so striking a feature in the nystagmus of spasmus nutans.

Lastly, this theory seems to assume that the head movements are secondary to the nystagmus; whereas clinical experience shows that the head movement often precede the nystagmus and occasionally no nystagmus appears at any time.

PROGNOSIS.

Spasmus nutans usually passes off after a few months, leaving no ill-effects; occasionally it lasts only from two to three weeks, more often it lasts from three to 12 months; it rarely lasts beyond the end of the second year. I have, however, seen nystagmus still present in one case at the age of four years.

As already stated, I know of no special relation between spasmus nutans and epilepsy, minor or major; indeed, I have not seen a single case in which the child has developed epilepsy either during the persistence of, or subsequently to, spasmus nutans. I suspect that the tradition of such an association has arisen from the description given by Ebert of cases of epilepsy with clonic jerking of the head under the same heading "Spasmus seu Eclampsia Nutans," an unfortunate confusion of disorders which differ widely both in their symptoms and in their course. In one of my cases a single convulsion occurred in the ten months during which spasmus nutans lasted, but it appeared to be an ordinary infantile convulsion such as any rickety infant may have, and no others occurred during the subsequent period of observation (five months).

I have been asked several times whether the disorder will leave any injurious effect upon the intellect and I have kept notes in several cases of the child's progress in walking, in talking, and in intelligence. I have not found them more backward than other children, unless the degree of rickets happened to delay development, which it rarely did; but spasmus nutans, being an index of nervous instability, is, I think, likely to occur in children who will show nervous peculiarities at a later age. (I am not alluding to imbecility, though there would seem to be some special liability to this disorder in Mongol imbeciles; two cases in my series were "Mongols," and Dr. Thomson includes two cases in his series of 35 cases and alludes to another.) In several cases I have thought that the child long after all trace of the disorder had disappeared was a highly nervous or eccentric child without showing any lack of intelligence. One patient was sent to me subsequently for "spitefulness and screaming," another at the age of four years because it was "so nervous and screamed at the slightest thing." Apart, however, from this possible foreshadowing of later tendencies to neurosis, it is probably safe to give an unqualified good prognosis.

DIAGNOSIS.

Spasmus nutans must be distinguished from a very rare congenital condition of nystagmus with head-nodding. This disorder, unlike spasmus nutans, is permanent, not transitory. In a case under my care, a boy, aged seven years, apparently of average intelligence, showed head-nodding very like that of spasmus nutans, but the nystagmus, which dated from birth, was coarser and less rapid than that usually seen in spasmus nutans and showed no unilateral predominance. The eyes, as in spasmus nutans, showed nothing abnormal apart from nystagmus.

Another curious movement to be distinguished from spasmus nutans is the head-rolling which is seen in infancy and sometimes in children just past infancy. It occurs chiefly when the infant is lying down—the child rolls his head monotonously from side to side on the pillow. The movement appears to be voluntary, whereas that in spasmus nutans appears to be quite involuntary; it is not associated with nystagmus.

Epilepsy with clonic jerkings of the head forward upon the sternum has unfortunately been called "eclampsia nutans" and by some writers "spasmus nutans," but apart from the name there should be little risk of confusion. The attacks consist of a series of forcible noddings of the head or bowing movements of the whole trunk, usually with loss of consciousness and other usual accompaniments of epilepsy. Nystagmus, if present, is only likely to occur as part of each attack, whereas in spasmus nutans it is to be seen just as often when the head is at rest as when the nodding is present; the epileptic nodding in infancy is associated almost always with idiocy sooner or later.

TREATMENT.

The very variable duration of this disorder and its frequent fluctuations in degree make it difficult to estimate the value of treatment. Diminution both of the head-nodding and of the nystagmus sometimes follows the use of sedative drugs and I have thought that phenazone was more valuable than bromide in these cases. At six months old half a grain, and at one year old one grain, of phenazone may be given. In some cases I have given a combination of bromide with cod-liver oil apparently with good results. The part played by rickets in predisposing to spasmus nutans suggests also the advisability of inquiring into the feeding and correcting any fault which may favour the rachitic tendency. I have no doubt also that cold or tepid douches as the infant sits in a warm bath tend to reduce the nervous instability and that confinement in a close, ill-ventilated room, whether well or ill lighted, increases this instability and is therefore to be forbidden. For this reason I have urged the parents to keep these children out of doors as much as possible, and I suspect that in the greater liability to confinement in a stuffy room with closed windows during the cold months lies the explanation of the seasonal incidence of spasmus nutrans rather than in any deficiency of light.

An Address
ON
PERICARDITIS IN CHILDHOOD.

Delivered before the Æsculapian Society on April 30th, 1906, to open a discussion on the subject,

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GENTLEMEN,—An opening address written to provoke discussion upon a particular subject should touch upon many points without exhausting them and may express views which do not gain universal assent. In the following remarks the first of these conditions will certainly be found to be fulfilled, and should some of the conclusions arrived at not meet with entire approval I hope it may also be considered that they deserve discussion before modification, acceptance, or dismissal. It is on the whole a fortunate tendency of the normal human mind that it directs attention chiefly to the most dominant factors in any situation. This attitude has, however, the disadvantage that it withdraws attention from the investigation of possibilities which may often be of minor importance but which may also occasionally prove of primary consequence and yet escape detection. Surgeons and also physicians, who have sometimes missed the key to a situation by neglecting, for example, the examination of the rectum, have frequently emphasised the importance of such an investigation in obscure cases, even if the symptoms do not positively point to that structure as their source. I feel inclined on the same grounds to insist that, as a matter of routine, the condition of the pericardial sac should be particularly examined, because there are few physical conditions in disease which are so often left undetected as is pericarditis when the effusion or other morbid condition is not of a very obtrusive nature. I need not, perhaps, recall the oft-told tale which relates how a certain distinguished physician called in consultation detected a pericarditis which

the very able family adviser had, much to his own annoyance, overlooked. The discoverer of the condition consoled his brother practitioner by remarking that it was perhaps as well that he had not detected it, as he might have been tempted to treat it! I have no doubt that the now deceased worthy to whom I refer had frequently himself missed a pericarditis and only found it post mortem, while his scepticism as to treatment embraced many conditions besides pericarditis, although in this instance it was probably in a measure wise.

In the early stages of the development of the heart in embryo that section of the cœlom which is ultimately shut off as the pericardial sac is, compared with the heart itself, relatively large, just as the whole embryo is, relatively to its amniotic sac, small. The heart grows to fill the pericardium until their relations are fixed by the attainment of the ultimate relative size of these structures. *Then* the heart fills the sac in normal circumstances so completely that only a very small quantity of fluid, a drachm at most in the adult and much less in the child, remains within it, to lubricate in health the movements of the ever-active organ. The *position* and dimensions of the heart thus become for clinical purposes those of the pericardium. But the distensibility of the sac is considerable and when it contains an excess of fluid its area is, relatively to the heart, much increased, as in early embryonic life, and to a certain extent this must be regarded as conservative. On the subsidence of such fluid contents, when this takes place and when at the same time the heart is affected by hypertrophy from some concurrent valvular lesion, as is often the case, the increase in size of the heart relatively to its containing sac also again reproduces the later relations of embryonic growth to which I have already referred. This increasing apposition of inflamed visceral and parietal pericardium is probably one of the causes which favour that adhesion of these surfaces, which is followed by still greater hypertrophy of the organ, more especially if at the same time adhesions have been established by inflammatory processes to structures outside the pericardial sac, such as the sternum, ribs, and pulmonary pleurm.

It has frequently been remarked that statistics are of little value for determining the ratio in which related physical events occur in pathology and in medicine generally. While this is perhaps true if our object be to attain a fractional precision, it does not necessarily hold good when we desire by even a moderate number of cases to ascertain the drift of certain underlying general principles. My taking this view must form my excuse for examining a certain number of fatal cases of pericarditis in children which have occurred in the practice of my colleagues, past and present, and myself at the Children's Hospital at Paddington Green, and anatomical particulars of which have been preserved in the post-mortem records of that institution.

In 44 cases of acute and chronic pericarditis the cardiac valves were unaffected by disease in 12 instances. The pericardium was not adherent in six and is stated to have been merely inflamed in five. It was adherent in 17 cases either to the epicardium or to both this and extraneous structures, while in three instances there were costo-pericardial adhesions without adhesions between the visceral and parietal layers of the sac. In one case the adhesions were pleuro-pericardial. In the 12 instances in which the endocardium was unaffected the pericarditis was due to tubercle, pneumonia, or empyema. In the vast majority of the remainder, in which there was valvular lesion, the cause of the disease was acute rheumatism, the few exceptions being constituted by congenital disease or malformation of the heart. That is to say, the cases in which valves escaped simultaneous implication in the pericarditic process were due to localised conditions, spreading chiefly by contiguity towards the heart, from immediately neighbouring structures. The cases, on the other hand, which showed endocardial as well as exocardial disease were the result of a general blood infection, the agents of disease being carried by that all-permeating fluid to all the component parts of the organ. Indeed, the late Dr. Octavius Sturges, who drew attention to this feature of heart inflammation in children, abandoned very largely the use of terms denoting the separate inflammation of the endocardium, myocardium, and pericardium, and used, as a rule, the general term "carditis," because of the universal nature of the cardiac inflammation in many such cases.[1] Pericarditis, in a limited number of cases, may be the chief lesion even when the inflammation is of rheumatic origin and the removal of a pericardial effusion may in such cases be the chief object of treatment, as it may also be the chief cause of danger to life. But in the majority of cases the pernicious influence of pericarditis alone is gradually asserted and is frequently marked by a notable exaggeration of the conditions which produce hypertrophy of the heart and disorder of its action. This may be gathered from the weight of the organ noted in cases of valvular disease and in which it is additionally hampered by the presence of extraneous adhesions. Thus, in nine cases in which the valves were affected and the pericardium at the same time was adherent the following particulars as to age, sex, nature of disease, and heart weight attained may be gathered from the records I have mentioned:—

No.	Sex.	Age (years).	Nature of disease.		Heart weight.
1	M.	10	Aortic regurgitation.	Adherent pericardium.	16 ounces.
2	M.	5	Aortic and mitral valvulitis.	,,	Large.
3	F.	5	,,	,,	Rather large.
4	M.	7	Mitral valvulitis; aortic reflux.	Adherent pleuro-pericardium.	Much enlarged.
5	F.	11	Mitral and aortic valvulitis.	Adherent costo-pericardium (not visceral).	15½ ounces.
6	F.	11	Mitral reflux.	Much viscero-pericardial and costo-pericardial adhesion.	25 ounces.
7	F.	5½	,,	Pericardium adherent generally.	Very large.
8	F.	13	,,	Pericardium firmly adherent.	26 ounces.
9	M.	8	,,	Cor villosum; pericardio-sternal adhesion.	18½ ounces.
10	F.	11	,,	Pericardium not inflamed; two ounces of fluid.	12 ounces.

The hypertrophic capacity of the heart as representing visceral muscle appears to vary in different people just as does the hypertrophic capacity of the somatic general musculature. But we can all develop our muscles and perhaps all our faculties to some extent in proportion to the resistance we have to encounter, provided we put our backs into the business slowly, continuously, and systematically and do not rush at a task with delirious precipitancy. So also we find the influence of tethering conditions in pericarditis exerts a certain exaggerating influence upon cardiac hypertrophy apart from the native developmental power of a given patient. Thus, if we compare Cases 5 and 6 among those to which I have just referred we find that they were both females and both 11 years of age. Case 5 had mitral and aortic disease, with costo-pericardial, but not viscero-pericardial adhesion and her heart weighed 15½ ounces. Case 6 had only a mitral regurgitant lesion but there was much viscero-pericardial adhesion and also adhesion of the pericardium to the ribs and her heart weighed 25 ounces. Now this notable difference cannot be accounted for by the nature of the valvular lesion, for, *a priori*, we should have expected the additional aortic lesion to have tended to add to the hypertrophy of the heart, for it is in disease of this valve that we more frequently find the cor bovinum, other things being equal, than in cases in which the mitral valve alone is affected. It is, of course, possible that No. 6 had the greater hypertrophic capacity to which I have referred, but a more probable cause is the difference in the nature of the pericardial lesions. In Case 5 the heart moved freely within its sac. In Case 6 both systole and diastole were impeded, in addition to any endocardial valvular impediment to the blood stream. In Case 8 also the case of a girl, aged 13 years, with mitral reflux alone and a firmly adherent pericardium, the heart weighed 26 ounces; while in Case 10, a girl, aged 11 years, with mitral regurgitation but without pericarditis (the pericardium merely contained two ounces of static serum), the heart only weighed 12 ounces. These facts are sufficient to declare the

[1] Heart Inflammation in Children, 1895, p. 5.

aggravating influence of chronic adhesive pericarditis in heart disease.

But when we consider the histology of pericardial inflammation we can see yet another source of deterioration in cardiac action due to that condition. In acute inflammation of the pericardium the stimulation of nerve trunks by the inflammatory process appears to be one of the causes of the disturbed action of the heart. I do not at present propose discussing this point in greater detail, in view of the prevalent myogenetic notions of some physiologists and physicians. For, insensitive as visceral nerves are in ordinary circumstances, we know that in conditions of disease pain may be referred to areas in which they are distributed and whatever the degree of independent muscular rhythmicality possessed by the cardiac muscle it is admitted that the heart is endowed with, and is under the control of, the nervous system. A specimen I place under the microscope shows how easily accessible cardiac nerve trunks are to spreading inflammatory processes in the pericardium. Under the external fibrinous layer of lymph a zone of active proliferation in the epicardium will be noticed. The invasion of leucocytes will also be observed at points to be creeping heartwards through the epicardial fat and at points of contact with the cardiac muscle interstitial proliferative processes will be seen in the latter. This section was made by me from the left ventricle of a girl who died in the Great Northern Central Hospital under the care of my colleague, Dr. C. E. Beevor. In more chronic conditions, with the thickening and organisation of interstitial carditis, muscle fibres degenerate and thus also some ultimate disability of the muscle cells is induced.

This pathological description applies to rheumatic cases in children which, as I have said and as Dr. Sturges pointed out, tend to become generally carditic. In these cases a so-called "simple carditis" may become "malignant" or "infective" or a malignant endo-pericarditis may be engrafted on an old heart inflammation of so-called "simple" character. Further discussion of these points would, however, rouse controversy which would lead us aside from our main theme—namely, the discussion of pericarditis in childhood as a clinical condition, practically considered. I need only add in this section that when extra-cardiac localised infections spread towards the heart and attack the pericardium the inflammation of the latter frequently becomes purulent, while, as I have stated, the endocardium and heart muscle as a whole escape.

The routine examination of the cardiac area at times leads to the early diagnosis of pericarditis. Thus a child was brought to me at the Children's Hospital, Paddington Green, on account of tonsillitis and the mother was unaware of any complaint beyond sore-throat. The tonsillitis was of the usual follicular type, but before dismissing the patient with a gargle and some salicylate mixture I placed the stethoscope over the heart and found general double friction sounds over the whole cardiac area. The child was at once admitted under my care to the hospital, when some effusion with increased cardiac dulness and diminished friction took place in due course. Although for a time there was noticed a soft apical bruit in the mitral area with triple rhythm, the patient was discharged recovered in about a month without any evidence of permanent endocardial lesion.

When there is evidence of general carditis with other rheumatic signs, pericarditis is not likely to be overlooked. Sturges points out that the fluctuation of percussion dulness at the *left* ventricular base—that is, at the level of the second and third left ribs—is the most trustworthy sign for determining variations in the amount of such pericardial effusion.[2] The effusion may be large and indicated by a much extended area of cardiac dulness with comparative inaudibility of heart sounds, or the distension of the sac may be too slight for detection at the bedside by clinical signs. Pericarditis is most likely to be overlooked when it is secondary to tubercle or pneumonia. In such cases the local conditions in the lung frequently appear sufficient to account for the state of the patient. In the absence of auscultatory signs of endocarditis the possible presence of pericarditis may not be suspected and is frequently only revealed after death. Thus a child ten months old admitted under my care at the Paddington Green Children's Hospital, exhibited a swinging temperature, dulness over the lower half of the right lung posteriorly, and an apex beat in the left nipple line, without noticeable bruit endo- or exo-cardial. The right pulmonary base was explored for pus, in view of the swinging temperature, on more than one occasion but without result. The child ultimately died. The lung was found to be in a condition of tuberculous consolidation, and the pericardium was full of a thin purulent fluid, while the surface of the heart exhibited the well-known shaggy appearance which has been termed cor villosum and is doubtless due to the movements of the heart within a cavity covered with recently effused lymph.

Passing from the diagnosis of acute to that of chronic conditions it might *a priori* be imagined that the detection of an adherent pericardium would not be an easy matter, except under certain well-defined conditions, and this is in practice found to be the case. Much ante-mortem positiveness, both for and against the existence of this condition, has been salutarily humbled by the revelations of the necropsy. But a justifiable surmise on this point may be made, as I have hinted, in certain circumstances. When the cardiac area is unusually large, the movements of the apex beat comparatively fixed in position on changing the posture of the patient to the right or left, and if, further, there be present a well-marked double bruit audible at the point of the heart we may be fairly certain of the existence of the condition in question, both as affecting the visceral and parietal layers of the pericardium and the tethering of the sac to the inner surface of the thorax. The double apical bruit in such cases appears to be due not only to incompetency of the mitral valve but also to some virtual narrowing of the atrioventricular inlet by approximation and fixation of the mitral curtains, caused by fixation of the ventricle, owing to pericardial adhesions. The recession of the intercostal spaces in the neighbourhood of the systolic apical impulse is not a trustworthy sign. It is no doubt witnessed when the heart is enlarged and the pericardium is adherent; but it is also seen when the organ is enlarged without being adherent. It may, that is, be due to negative pressure within the chest, not to active drag on its walls. A boy, aged 11 years, was admitted under my care to the Children's Hospital, Paddington Green, on July 24th, 1905, whose case is interesting and as it illustrates some of these points may be briefly related. He had suffered from rheumatic fever when six years of age and had been in other hospitals at that time, when his heart was known to be affected. On admission to hospital at the above date he had much dyspnœa, ascites, and œdema of the legs. The cardiac area was greatly increased, the apex beat being in the seventh space six inches to the left of the mid-sternum, and auscultation revealed an apical double bruit which was also audible in the back. The second sound was reduplicated and there was no sign of aortic valvular disease. Digitalis, strophanthus, and strychnine were prescribed in sufficient doses and 23 ounces of fluid were removed from the abdomen by paracentesis, after which his general condition improved. In August he was transferred to the Great Northern Central Hospital, still under my care, as the Children's Hospital was closed for cleansing. There his condition again became grave. The urinary output fell very much, his dyspnœa was urgent, and the pulse was quick; but under cardiac tonics and the steady administration simultaneously with these of opium he again improved and about the end of September returned to his own home much relieved as regards circulation and respiration but only so when at rest; any exertion still caused distress. He appears to have remained fairly comfortable at home until the beginning of December when his circulatory embarrassment again became great and he was readmitted to the Children's Hospital under my care on the 6th of that month. The physical signs were much as on admission originally but the liver was greatly enlarged and there was also again some ascites with considerable cyanosis. Although digitalin, strychnine, and morphine were used hypodermically and the patient was bled twice he gradually sank and died next day.

After death the heart was found to be greatly enlarged and weighed after the removal of all clots 21 ounces. The lungs were pushed aside and the external surface of the pericardium was extensively in contact with the thoracic wall and adherent to it. The visceral was likewise much, but not universally, adherent to the parietal pericardium. The heart itself was greatly dilated and hypertrophied, especially in its dextral chambers, and the tricuspid and mitral orifices admitted respectively five and four fingers, while the edge of the posterior curtain of the latter was slightly thickened. The pulmonary and aortic valves were competent and unobstructed. The other organs exhibited the usual phenomena of chronic congestion. The case was

[2] Loc. cit., p. 35.

therefore one in which endocarditis, if present at all, had played a very subsidiary rôle. The large size of the heart, its comparative fixation in position, and the double apical bruit led to the surmise of adherent pericardium during life and the necropsy justified the belief. In the most marked cases, however, experience and the humbling revelations of the dead-house have taught us sufficient prudence to avoid positiveness in the diagnosis of many cases of adherent pericardium.

The *prognosis* of pericarditis in childhood is roughly indicated by the history of the three types of case which I have mentioned, although differences in detail may modify the destiny of sufferers even in these cases. There was: 1. The case of uncomplicated pericarditis with effusion following tonsillitis in which the heart ultimately returned, so far as clinical signs could determine the fact, to a normal condition. Cases are met with also of this type in which the issue, if ultimately favourable, is much more delayed. The effusion may be much greater and more persistent and even require surgical aid for its removal. When, moreover, such pericarditis is associated, as is often the case, with more serious implication of the myo- and endo-cardium the result, as we know, is too often fatal, the determining factor in such cases usually being the concurrent disease of more vital structures or the greater virulence of the infective state to which the local lesions, both endo- and peri-cardial, owe their origin. 2. The pericarditis of childhood associated with tuberculosis and pneumonia even without endocardial complication is always of grave prognosis and the tuberculous perhaps more hopeless than the pneumococcic. 3. Prognosis in adherent pericardium is naturally dependent largely upon the degree of symphysis within and outside the pericardial sac and, as I have stated, the determination of this point is by no means easy. The very hypertrophic capacity of the heart which favours the notable increase in the size of the organ in some of these cases seems to favour additional tethering impediment to cardiac action by bringing the sac into close contact with the heart and surrounding parts.

When pericarditis is, as is frequently the case, a secondary incident in a grave general infection and the degree of inflammation of the sac is moderate and non-purulent so far as clinical signs can reveal these conditions, while the amount of effusion is also not great, it will be well to remember the sage sarcasm of the able physician with whose remarks on the treatment of pericarditis I commenced this paper. The less it is treated as a separate entity the better. To add dermatitic discomfort by blistering to the general distress of the little patient in these circumstances seems wanton, because useless. When, however, inflammation of the pericardium is the initial event and there is reason to believe that the accumulated fluid is purulent in character, or its amount from physical signs great and in itself a source of danger to life, inactivity ceases to be masterly and interference by local methods not only justifiable but at times affording the only prospect of a successful issue. While the lines of general treatment remain the same, whether the pericarditis be associated with endocarditis or not, and are indicated by the nature of the infection and state of the heart and other organs, an early and non-purulent pericarditis may be treated by leeching, external warmth, or careful blistering like any other definitely localised inflammation. If purulent in character and recognised as such, or if large in amount and itself, as may be the case, threatening to life, the pericardial contents should be withdrawn by incision and drainage or by aspiration or trocar as may be indicated. As between these methods there can be no doubt that removal of a portion of parasternal cartilage, exposure of the sac, and careful incision or puncture would be a much safer and more scientific procedure than the blind puncture usually practised and which, as is well known, has on occasion proved immediately fatal by wound of the heart.

Dr. Samuel West relates a case of purulent pericarditis in a boy, aged 16 years, which was successfully treated by free incision and drainage[3] and also furnishes statistics of a considerable number of cases of serous, sanguineous, and purulent pericarditis surgically treated, some of which were in children.[4]

The local treatment of the chronic condition, the treatment of adherent pericardium is at present, and in some cases will always remain, outside the range of interference by local means. We have seen, however, that such adhesion is an aggravating incident in the carditis of children and apparently an incentive to cardiac hypermyosis, as I would suggest, we might term that degree of hypertrophy, which has been likened to the heart of an ox. As, moreover, we occasionally meet with cases post mortem which suggest that the adhesions might have been dealt with during life by surgical methods with comparative ease, we should not lightly dismiss the possibility of surgical interference in some of these cases. Could we discriminate these cases with some certainty during life it seems feasible that their treatment by surgical methods might remove one of the factors in the hypermyosis to which reference has been made and thus lighten the cardiac struggle without necessarily shortening the life of the patient. The point could, of course, only be fully determined by an exploratory operation as in other regions and carried further or abandoned as circumstances indicated.

I am aware that in speaking thus I do so on theoretical grounds and not from actual experience, but such thought has frequently preceded action ultimately justified by results, and I am not unhopeful that surgery, which has accomplished so much, may also in well-defined circumstances find a place in some cases of adherent pericardium. To return to our embryo, the growing organ requires a surplus of room to grow in; the overgrown organ requires more room to work in and it may be that tethered by extraneous adhesion, or not so restricted, the hypermyotic heart may in the future and in some cases be provided with such by the genius and courage of some surgeon bold enough to undertake the task. Human life is sacred, but not necessarily the pericardium, the division of which, with or without removal of ribs, might release, if only in a measure and for a time and even only in a few cases, an overgrown or overtaxed heart. I believe, however, that such a procedure would be justifiable more frequently than we are at present disposed to think. To the derision of a reviewer I advocated cardiac symphysiotomy some years ago[5]; but time was when opening the pericardium for any purpose whatever was regarded as unjustifiable. According to Dr. West[6] physicians such as Van Swieten and Laennec had to urge surgeons to perform even paracentesis pericardii and elaborated plans for its execution to induce them to act. Aseptic surgery should be able to go a step farther in this direction with less hesitation, and by releasing tethering and removing bone and cartilage provide the additional space which the enlarged organ demands for easier systolic contraction and which it gains at present by injuriously encroaching upon the territory of the lungs.

The consideration of the treatment of disturbances of cardiac action associated with pericarditis both acute and chronic does not strictly fall within the scope of this paper, but the general outline of treatment mentioned in connexion with the last case cited sufficiently indicates the mode of procedure and may serve to provoke discussion. I would especially call attention to the value of opium and of sufficient doses of the digitalis group in these circumstances. So long as a physiological antidote to the over-action of opium exists in the constitutional state of the patient, as manifested by violent and disordered action of the heart, usually associated with dilated pupils—the pupil of belladonna—children tolerate much larger doses of opium than is often supposed probable, while pushing the digitalis group, that is, carefully increasing their dose, frequently helps to steady a heart unaffected by smaller quantities of the same agents.

[3] Transactions of the Royal Medical and Chirurgical Society, vol. lxvi., p. 235.

[4] Ibid., p. 268.

[5] Cardiac Failure, p. 89, 1897.

[6] Loc. cit., p. 256.

ROYAL COLLEGE OF PHYSICIANS OF EDINBURGH.—A quarterly meeting of the Royal College of Physicians of Edinburgh was held on July 17th, Dr. John Playfair, the President, being in the chair. Dr. Andrew Balfour was introduced and took his seat as a Fellow of the College. Mr. Sydney Wilson Thompstone, M.R.C.P. Edin., Zungeru, Northern Nigeria, West Africa, was admitted by ballot to the Fellowship of the College. Dr. James Mair Rutherford and Dr. John McGibbon were admitted to the Membership of the College after examination. The Registrar reported that since the last quarterly meeting of the College 25 persons had obtained the licence of the College by examination. Dr. Francis Darby Boyd, C.M.G., was recognised as a lecturer on materia medica. The regulations regarding the Membership and Fellowship of the College for the ensuing year and the regulations for the triple qualification were approved.

APPENDICITIS AND GANGRENE OF THE VERMIFORM APPENDIX CONSIDERED AS SEPARATE DISEASES.[1]

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THE object of this paper is to show that in a considerable number of cases of mischief connected with the vermiform appendix the initial lesion is a formation of a gangrenous patch in the wall of that part of the intestine, a condition which is frequently associated with an appendicitis beginning in the mucous membrane but which may arise independently.

Cases of appendicitis beginning in the mucous membrane.—In a very large proportion of cases the symptoms and the physical changes observed are easily understood as the effects of inflammation beginning in the mucous membrane and extending outwards in varying degrees. I have illustrated some of the conditions which may arise by short records of six cases.[2] I do not, however, propose to read these notes. All the patients recovered and there can be little difference of opinion concerning the relationship of the phenomena described to their causes. When the lumen of the appendix is quite open a continuous or repeated catarrhal inflammation induces an organic stricture and, if such a process begins at the tip, an obliteration of the whole canal may gradually take place without symptoms, the occluded appendix being discovered accidentally. On the other hand, when an inflammation of the mucous membrane of this tube is associated with an obstruction to the outflow of its contents the symptoms commonly attributed to an appendicitis develop. Recovery may follow so that no evidence of disease remains or after recovery is fully established from a clinical point of view the appendix may be found permanently dilated by muco-pus on the distal side of an incomplete stricture or peritoneal adhesions may alone indicate that previous mischief has existed. But an inflammation associated with an obstruction may bring about an extension of disease by ulceration of the mucous membrane and the ulcerative process may eat into, and penetrate, the wall of the appendix so that an abscess cavity forms in the adjoining tissues. This extension of inflammation is always preceded by a formation of serous adhesions, so that abscesses thus formed do not burst into the peritoneal cavity unless the parts are exposed to injury. A movement of the bowels may sometimes cause a sufficient strain to bring about a rupture but this rarely occurs. Two of my cases show that if the obstruction in the lumen of the appendix is relieved after an abscess has formed and if the abscess discharges freely through the appendix into the cæcum the patient may appear to recover, although a pus cavity still exists. One of the patients was sent to the country as convalescent and appeared to remain well for a fortnight, although she had an abscess as large as a pigeon's egg near the centre of her abdomen.

According to these views the importance of an obstruction in the lumen of the appendix as a cause of symptoms of appendicitis is very great. Indeed, it seems to me not too much to say that none of the ordinary clinical indications of this condition ever do arise unless the lumen of the appendix is obstructed. As in all other parts of the alimentary canal so in the appendix a catarrhal inflammation of the mucous membrane may be regarded as painless, unless its surface is stretched, or some obstruction to the muscular contraction of its wall exists and causes a colic. Similarly a catarrh of the appendix without retention of secretions rarely, if ever, induces a rise of temperature. Further effects of inflammation, such as sloughing, hæmorrhage, and the development of metastatic collections of pus, depend on the particular micro-organisms that are most active for mischief in individual cases. All the foregoing conditions are easily understood as the results of inflammation but there are other cases which require a different explanation.

Gangrenous changes in the wall of the appendix.—There are four conditions in which it is known that a local death of tissue may take place and may be unaccompanied by any clinical sign of the change except those which *follow* it. These are: (1) in senile gangrene; (2) in the case of a perforating gastric or duodenal ulcer; (3) in the wall of an ovarian tumour; and (4) in a fibroid uterine tumour. The evidence seems to me conclusive that a similar death of tissue may take place in a part, or in the whole, of the wall of the vermiform appendix without any indications preceding its occurrence. The cause of death in the conditions referred to is a matter of much interest but it has no bearing on my argument. The point is that a dead patch of tissue may exist whilst the individual appears for a time to be in perfect health and by this view it is possible to account for many of the phenomena connected with the vermiform appendix which are otherwise inexplicable. Case 7 is important in this connexion. The salient features of the history are as follows. A woman, aged 71 years, had a slight pain and tenderness about the middle of the ascending colon. After 30 hours there was some resistance over this part but the rest of the abdomen was soft and mobile. The temperature had gradually risen to 100° F., whilst the pulse was beating from 80 to 90 to the minute. The rectum was full of fæces and the bowels had not moved for two days. The patient did not appear to be seriously ill. No opiate was given. An enema was administered late at night and the bowels acted well. Next morning the conditions had altogether changed. The abdomen was immensely distended and very hard, the patient had been vomiting and retching for many hours, her pulse was 130, and she was obviously very ill, but there was no great pain, and the temperature was only 100·6° F. The abdomen was opened 44 hours after the onset of the illness. The vermiform appendix was situated outside the middle of the ascending colon. It was not adherent but was immediately surrounded by loose flaky lymph and the loin pouch contained a few ounces of slightly turbid serous fluid free in the peritoneal sac. The intestines were immensely distended and were emptied by incisions which were carefully closed but gaseous distension rapidly re-developed and death occurred early the next morning. The appendix had three well-defined gangrenous patches in its wall. These were not shrunken nor surrounded by a swollen or angry area and they were in continuity with the rest of the wall of the appendix, so that there was no rupture. The lumen was patent throughout and there was no stercolith.

This case suggested the view that I now advocate. It seemed that if these patches of dead tissue were the results of an inflammation there should have been a rapidly advancing high fever, continuing for some days before it terminated in gangrene, and all the parts around, not only in the wall of the appendix but also in the adjacent structures, should have been very vascular and œdematous. But evidences of an acute inflammation were wanting, whilst the symptoms and physical conditions may be fully explained as consequences of the passage of slightly irritating organisms through the patches of dead tissue *after* these had formed. Thus a spreading peritonitis of little virulence, causing a sero-purulent exudation, was first excited. An escape of greater numbers of the microbes or perhaps of some different micro-organisms accounted for the development of flaky lymph. Paralysis of the bowel with symptoms of intestinal obstruction and of septic infection inevitably followed, and the rapid pulse was due to the vomiting and general weakness. This case brought to my recollection one (Case 8) which came under my care ten years ago and in which the phenomena were exactly the same in many details. But in Case 8 the patient had long been subject to attacks attributed to pelvic inflammation and her last illness was ushered in by very severe pain. This initial symptom was probably due to a distension of the appendix. It is obvious that a stretching of a living tube, containing a gangrenous patch in its wall, must cause intense pain by dragging on the tissues adjacent to the dead area.

In these two cases the evidence that the gangrenous change was not due to an inflammation depends on the fact that the necrotic patches existed although signs of inflammation of sufficient intensity to be accompanied by a death of tissue were wanting. Other conditions point with equal certainty to the conclusion that gangrenous areas may develop without preceding symptoms. Dr. Howard Kelly and Dr. E. Hurdon quote two cases operated upon by Finney, in one of which the appendix was removed within three hours of the apparent onset of mischief and it was "gangrenous on one side and ready to perforate." In

[1] Abstract of a paper as read before the Royal Medical and Chirurgical Society on June 26th, 1906.

[2] Three of these are published in full in the Clinical Journal April 11th, 1906) and in the Brit. Med. Jour. (July 14th, 1906, p. 71).

the other case, that of a young physician, the operation was performed within six hours of the initial complaint and "there was every reason to believe that the very first pain he felt was occasioned by the perforation."[2] Both cases recovered. There can be no doubt that in these cases the death of a patch of tissue in the wall of the appendix had occurred before there were any symptoms and that for a time the patients were apparently quite well, although in each a portion of the appendix was dead.

Spontaneous recovery from localised gangrene of the appendix.—It is difficult to understand how an area of necrosis in the wall of a hollow viscus can prevent an escape of infective micro-organisms until it has become so loosened that a gross perforation suddenly takes place, but the following cases throw light on this point. In Case 9 the patient, a woman, aged 58 years, was operated upon 19 days after a severe attack attributed to appendicitis began. Convalescence was thought to be thoroughly established, febrile symptoms and abdominal distension having subsided and the bowels being moved by purgatives without inconvenience. The appendix was universally adherent, chiefly to small intestine, but the attachments were easily separated by the finger as if the adhesions had just formed. The appendix had two holes in its wall close together, one being of oval shape and nearly half an inch long and both being surrounded by granulation tissue (Fig. 1). The small intestines were extensively adherent and on disentangling the coils two were found more firmly united than the others but still quite lightly attached. On each there was a granulating surface, the two making an area which had evidently been fitted upon the openings in the appendix. When the

FIG. 1.

Appendix removed 14 days after recovery from an inflammatory attack. The openings were closed by adherent bowel. The proximal opening measured nearly half an inch by a quarter of an inch (see Case 9).

granulating surfaces were cut off and the raw tissues were sewn over the rest of the intestine showed hardly any sign that it had been adherent. There was no visible pus and the lumen of the appendix was not distended. The appendix was removed, the abdomen was closed without drainage, and the patient made a good recovery. Case 10 was in all essential details the same as Case 9 but the appendix lay outside the cæcum and there was a partial obstruction in its lumen, the distal part being distended by mucus, not by pus.

In each of these cases the patients appeared to be quite well when a perforation with loss of tissue of the wall of the appendix existed, the opening being sealed over by adherent peritoneum. If the development of these conditions had been caused by an ulcerative inflammation it would have been accompanied by the formation of a considerable abscess walled in by firm adhesions. Each of the patients undoubtedly passed through an inflammatory attack exactly simulating an appendicitis, but in each an obvious perforation without an abscess was found. Clearly an inflammation extending from the mucous membrane did not account for the phenomena observed. All the symptoms and pathological changes may, however, be fully explained in the following way. A gangrenous patch formed and the appendix became lightly adherent to adjacent peritoneum, either because of the escape of microbes which caused an adhesive exudation or because of the mere presence of the dead tissue. After a time the slough separated, became disintegrated, and was discharged through the appendix. Inflammation accompanied the separation and continued until a granulating surface formed and all tension ceased. But the inflammation affected that part of the peritoneum and that part of the wall of the appendix which had been adjacent to, and attached to, the dead patch, and its origin was therefore quite different from, and should be clearly separated from, that of an inflammation commencing in the mucous membrane. It is obvious that if in either of these cases a sudden increase of pressure had arisen within the wall of the appendix the adhesions would have been very easily broken down. In the case (No. 10) in which the appendix lay outside the cæcum the adhesions were so extensive and so well supported by the natural pressure of the cæcum against the abdominal wall that a localised abscess would probably have formed. Such an abscess when fully developed would exactly resemble one arising from an extension of inflammation from the mucous membrane by ulceration. In the case (No. 9) in which the perforation was closed by very slightly adherent coils of small intestine any considerable pressure within the appendix might have given rise to a rupture into the peritoneal cavity with a free escape of mucus and perhaps of fæces. Such a rupture might be accompanied by very acute symptoms, without preliminary warning, when the phenomena observed in Finney's cases above referred to would be reproduced. But the rupture might be preceded by evidences of an inflammatory attack beginning in the mucous membrane as in the following case.

In Case 11, a woman, aged 37 years, had signs of a severe intra-abdominal inflammation, the temperature rose to 103·5° F., the pulse to 140, the abdomen became very hard and greatly distended, and the patient vomited frequently. I saw her in consultation after 36 hours. At that time the conditions were all improving, the sickness had stopped, the bowels had moved, and much flatus had passed and continued to be expelled through the rectum from time to time. The abdomen was quite soft and mobile, there was no pain, and I did not detect any tenderness except when I pressed on the neck of the uterus which had been curetted some months earlier. The temperature had fallen to 100° F.; the pulse was still as high as 130 but of fairly good quality. I thought the patient was recovering from the effects of over-indulgence in indigestible food. I did not see her again but I was informed that the conditions remained much the same for about 20 hours and then all the unfavourable symptoms returned and the patient died 12 hours later. At the necropsy two ruptures were found in the appendix, one having sloughy edges, and much fæculent matter had escaped. It seems to me that in this case the patient's condition had greatly improved when I saw her, because she was recovering from an attack of inflammation beginning in the mucous membrane of the appendix and that afterwards a gangrenous patch separated from the wall of this tube, adhesions which had formed gave way, fæculent matter escaped, and the patient rapidly died.

Conclusions as to the results of gangrene formation.—From the foregoing considerations it would appear that gangrenous patches forming in the wall of the appendix may bring about three well-defined conditions which are easily understood and are quite independent of inflammation beginning in the mucous membrane, although this also may be present. First, there may be an escape into the peritoneal cavity of micro-organisms which excite a serous, a sero-purulent, or a purulent exudation unlimited by adhesions. Second, the adjacent peritoneum may become adherent over a gangrenous patch and the latter separates and is discharged through the appendix, recovery taking place. Third, a gangrenous patch may thus become sealed off, but when it separates the adhesions also give way and a localised abscess forms or a rupture into the peritoneal cavity takes place. As the pathology and the consequences of gangrene formation are so different from those of inflammation beginning in the mucous membrane it is necessary that the two conditions should be clearly differentiated from a scientific point of view and as much as possible in practice.

[2] The Appendix and its Diseases, by Dr. Howard Kelly and Dr. E. Hurdon, p. 408.

The numbers of the cases of localised gangrene of the appendix.—These cases are very rare in proportion to the number of cases of inflammatory mischief in the appendix but they bulk very largely in the death-rate. Dr. Kelly and Dr. Hurdon found that out of 4028 necropsies in three large hospitals there were 86 cases in which death was due directly or indirectly to acute inflammatory disease of the vermiform appendix. Of these 86 deaths, "in 29 cases there was acute gangrenous appendicitis with single or multiple perforations. In two of these a gangrenous appendix had entirely sloughed away from the cæcum." "In 25 cases inspection of the abdominal cavity at the time of the autopsy revealed no sign of any tendency towards limitation of the inflammatory process to the immediate vicinity of the appendix, nor was there anything pointing to a previous abscess in the region of it."[4] Probably in all these 25 cases death was due to gangrene formation. But, as I have pointed out, there is reason for believing that in some cases a localised abscess may develop around a gangrenous perforation. The deaths due to gangrene may therefore be considerably more than 25 out of 86; yet even if these figures indicate the full numbers of such cases the condition must be regarded as a very important one

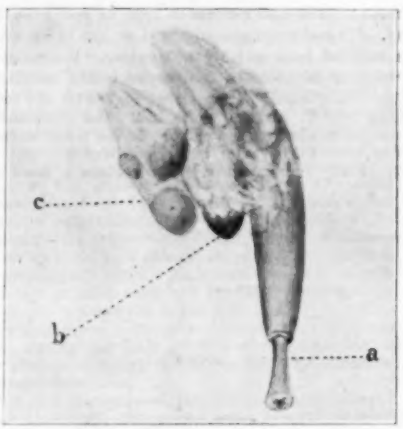
Diagnosis and treatment.—If we could make an exact diagnosis between the signs and symptoms of inflammation of the appendix beginning in its mucous membrane and those of the gangrene formation which occasionally occurs in its walls the treatment would be much simplified, but the differential diagnosis may be very difficult.

There are various indications of danger and rules of treatment which should be kept in view. The administration of opiates should be avoided if possible. On the other hand, laxatives and enemata may effect a cure and may be administered early in cases of inflammation, but they are contra-indicated when gangrene exists. Hence whenever they are given in a case of appendix mischief preparations should be made for an immediate operation if urgent symptoms develop. In cases of very insidious onset a purge may prove beneficial by hastening the development of symptoms indicating the necessity for operative treatment. Nothing can be gained by watching such a case as No. 7 above recorded, even when the symptoms show no urgency. Paralysis of the intestine is the most certainly fatal complication of an abdominal disease and every endeavour should be made to anticipate its onset by operative treatment in appendix cases. But the differential diagnosis between cases in which a gangrenous patch is present and those in which an inflammation spreading from the mucous membrane exists is often so uncertain that the propriety of operating in every case in which appendix mischief is diagnosed must be considered. An operation for the removal of an inflamed appendix, if undertaken before septic mischief penetrates its wall and when the patient is suffering from a first attack, should be one of the safest in surgery. But when old adhesions exist great difficulties and dangers may arise from an attempt to remove the acutely inflamed appendix. Such cases would, of course, be practically eliminated if all were operated on early or in the first interval, a course which would lead to the saving of many lives. There would still, however, be a number of unrecognised chronic cases becoming acute and also of those in which the patients refused operation during an interval. Hence the surgeon is liable to meet with circumstances in which if he operates and finds many old adhesions he can only remove the appendix with great danger to the patient who may be in no fit state to undergo a serious operation, whereas if he does not operate and the patient happens to have a gangrenous patch infective mischief may rapidly obtain such a hold on the peritoneum that no treatment will be of any use. There can be no doubt, however, that the majority of cases of appendicitis recover without an operation being even thought of, and cases in which mild but decided febrile symptoms develop along with a well-defined localised swelling may be watched with little anxiety. On the other hand, in cases of gangrene formation with a sudden gross perforation the onset of the illness may be so acute that an immediate operation is clearly indicated, and Finney's cases show how successful this treatment may be. There are, however, many cases in which both inflammation and gangrene formation occur and the two conditions seem to be frequently related in such a way that the signs of the inflammation are subsiding when those of gangrene formation develop. In this way an adequate explanation is afforded of the "period of repose" so frequently observed in these cases. Hence, assuming that there are sufficient grounds for definitely diagnosing an appendix lesion, all cases beginning very acutely or in which urgent symptoms suddenly develop should be operated on immediately

When there is any doubt as to the course to pursue the case must be considered with great care and probably more harm will be done by unwisely avoiding an operation than by a too active treatment, provided, of course, that the procedure is carried out with reasonable discretion and consideration. I would urge, however, that the difficulties and dangers do not arise so much from an appendicitis as from the fact that the patient, or even an individual who appears to be in perfect health, may have a gangrenous patch in his appendix causing no symptoms whatever, but which after a time, either slowly or with the greatest rapidity, may induce conditions that terminate certainly in death. The fact that a sufficiently early operation will bring about the recovery of a large number of patients in these desperate conditions is a strong argument in favour of prompt interference.

Case 12 suggests a line of treatment that may occasionally be desirable. The abdomen of a lad, aged 18 years, was opened during an acute appendicitis but the operator did not remove the appendix because of its close attachment to the bowel, the inflamed and softened condition of the parts, and the state of the patient. A tampon was inserted and recovery followed without pus formation. The difficulty was due to a previous attack 12 years earlier. The operation was performed abroad by an experienced surgeon and when the patient was quite well I successfully removed the appendix. It was acutely bent near its tip (Fig. 2) and

FIG. 2.



Appendix from Case 12. a, Constriction; b, tip; c, glands (several were separated during the operation).

there was a constriction about half an inch from the cæcum so narrow that a bristle would not pass. The part between the bend and the constriction was distended by a thick yellowish fluid. A point of interest in this case was that there were five or six lymphatic glands, some of them half an inch long, clumped together close to the appendix. It would appear that this quite unusual arrangement had been produced as a defence against the invasion of bacteria. Obviously a source of danger had existed from the date of the first attack at the age of six. There is no doubt that it was wise not to remove the appendix when the abdomen was first opened, for the operation which I performed would have been extremely formidable if the circumstances had not been favourable. Certainly it would be better occasionally to undertake two operations as in this case than to delay interference and to miss the opportunity of curing a patient with a gangrenous patch, or to persevere with an operation in order to obtain an immediate success under desperate conditions when a safer,

[4] Loc. cit., p. 212.

although less brilliant, method is available. In the circumstances of this case the absolutely essential part of the operation is to ascertain if a gangrenous patch exists. If there be no such lesion the removal of the appendix is not urgently called for, but, as a rule, its excision will be easy and should be accomplished. When difficulties are great it may be wiser that drainage should be provided for and that the appendix should be left for the time. To discuss the propriety of these proceedings involves a confession of inability to make an exact diagnosis, but if the view I advocate is correct it is certain that an urgent necessity for operative treatment may arise in connexion with the vermiform appendix before there are any symptoms at all. The conclusion that a most serious condition may exist when a diagnosis is impossible does not seem to be very helpful, but a recognition of this fact enables us to understand much in these cases that cannot be otherwise explained and to understand a condition is the first step to its rational treatment.

Portman street, W.

FLAGELLATED PROTOZOA IN A PERINEAL ABSCESS.[1]

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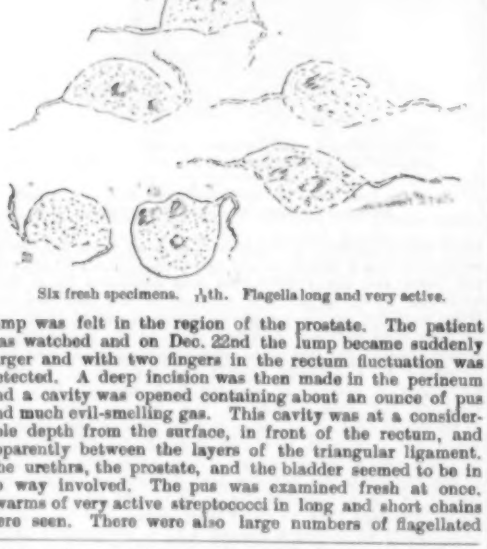
THE patient, a Eurasian, aged 48 years, was admitted to the Railway Hospital on Dec. 16th, 1904, complaining of a "pressure pain" in the pelvis and difficulty in micturition and defæcation, which had commenced three days before. He had formerly been in many countries, including England, Egypt, &c., while working as a marine engineer. Apart from gonorrhœa in 1890 and malaria in 1903 he had always been healthy. He had never passed blood or pus in his urine nor had he suffered from any rectal troubles. He remembered swallowing a fish bone a few weeks before admission to hospital. On admission the patient looked ill, the temperature being 101° F. and the pulse 110. The lungs and heart were normal as also was the urine. In the blood no malarial parasites were to be seen but there was a slight leucocytosis, chiefly multinuclear. Per rectum a hard tender

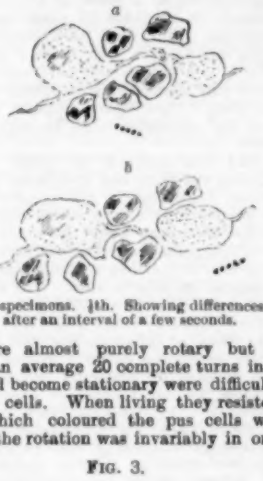
FIG. 1.



Six fresh specimens. $\frac{1}{12}$th. Flagella long and very active.

lump was felt in the region of the prostate. The patient was watched and on Dec. 22nd the lump became suddenly larger and with two fingers in the rectum fluctuation was detected. A deep incision was then made in the perineum and a cavity was opened containing about an ounce of pus and much evil-smelling gas. This cavity was at a considerable depth from the surface, in front of the rectum, and apparently between the layers of the triangular ligament. The urethra, the prostate, and the bladder seemed to be in no way involved. The pus was examined fresh at once. Swarms of very active streptococci in long and short chains were seen. There were also large numbers of flagellated bodies, each rather larger than a pus cell. These presented a very striking appearance from their extraordinary activity. They were more refractile than the pus cells. The outer coat was very thin and easily protruded when the organism came in contact with pus cells. At first two or three darker masses were seen inside resembling nuclei. The rest of the body was filled with fine granules. The flagella were two, situated nearly, but not exactly, opposite each other. These moved freely and seemed to pull the organism along among the pus cells. The pus was placed in a warm chamber and after six hours most of the flagellated bodies had become circular and looked much smaller. The flagella were shorter and difficult to see. The

FIG. 2.



a and *b*, Fresh specimens. $\frac{1}{12}$th. Showing differences in shape after an interval of a few seconds.

movements were almost purely rotary but still rapid, numbering as an average 20 complete turns in 15 seconds. Those which had become stationary were difficult to pick out among the pus cells. When living they resisted taking up weak stains which coloured the pus cells well. It was remarked that the rotation was invariably in one direction,

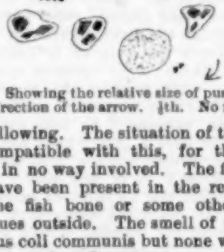
FIG. 3.

$\frac{1}{12}$th. After six hours. Rapid rotation. Short flagellum seen.

the apparent movement being as the hands of a clock. In no stained specimen could this organism be seen. Various methods were tried but all were equally useless. The urine and fæces were examined but no similar bodies were seen.

The patient made a rapid recovery and the wound closed as soon as the drainage-tube was taken out. He himself gives as the cause of his trouble the fish bone which he

FIG. 4.



After six hours. Showing the relative size of pus cells. Rotation rapid in the direction of the arrow. $\frac{1}{12}$th. No flagella visible.

remembered swallowing. The situation of the abscess would certainly be compatible with this, for the prostate and urethra seemed in no way involved. The flagellated bodies might perhaps have been present in the rectum and, either by means of the fish bone or some other agency, have reached the tissues outside. The smell of the pus strongly suggested bacillus coli communis but none were found either in film preparations or in cultures.

This case shows the importance of examining pus immediately and alive. It is impossible to detect such protozoa in specimens prepared by any of the ordinary stains. It may well be that such protozoa play an important and unsuspected rôle in the causation of many forms of suppuration and that their presence is not detected owing to the fact that the methods commonly used in the examination of pus are not suitable for their demonstration.

Secunderabad.

[1] For various inevitable reasons there has been much delay in the publication of Dr. Henderson Hunt's interesting note.—ED. L.

A FEW SUGGESTIONS FOR THE FUTURE OF CONSUMPTIVE PATIENTS OF THE WORKING CLASSES.

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AT the present time, when so much attention is being paid to the provision of proper facilities for the treatment of tuberculosis among all classes of the community, how best to advise consumptive patients after such treatment as to their future career is becoming more and more a matter for earnest consideration.

The initial requirements are known to all and indeed are obvious. Each individual should be placed under medical supervision at a sanatorium or under similar conditions at home if he can afford to pay for treatment. If unable to do so he should be sent to some institution, whether a chest hospital or a sanatorium, more or less supported by voluntary contributions. If ideal conditions prevailed he should remain therein until either the disease were arrested or he were released by death. This, however, is not at present practicable, partly on account of the paucity of such institutions and the insufficient support rendered to those that are actually in being, and partly from the necessity for material aid to tide the family over the period during which the bread-winner is undergoing treatment and education, a purpose for which no due provision has as yet been made. The best that can at present happen is for a patient to be sent to some institution for a time, rarely exceeding nine months, during which, if he is fortunate, his disease becomes more or less arrested, and he is instructed in healthier modes of life and how to take precautions to avoid being a source of risk to others. Even among those who can afford in some measure to pay for treatment a long course is rarely possible, for when both the patient and his household have to be supported on a diminished income reserve funds are rapidly exhausted. Also a patient's occupation can seldom be kept open for an indefinite period, so that the individual has to choose between returning to work, it may be somewhat prematurely, and seeking fresh employment after a longer convalescence, with the prospect of a diminished wage and lost opportunities for promotion. Recognising, then, the imperative necessity for each patient to earn his own living the question to be considered is the nature of the employment he should seek. We all know the ideal; what is needed is a practical solution of the difficulties that confront us.

It would appear that sufferers receive advice and suggestions of the most diverse and often unpractical nature from all who come in contact with them. Even members of the medical profession cannot be entirely absolved from the charge of at times giving advice hastily without considering the occupation, ability, and financial position of the individual patient, which are probably of more importance in this connexion than the actual extent of his disease. It is a constant experience on inquiring what a patient proposes or hopes to do on leaving a chest hospital or sanatorium to obtain such answers as: "I have been told I must get light open-air work" and "I have been advised to live in the country." Others appear to have received the impression that they should take up gardening as a means of livelihood, or go for a voyage as a ship's steward, or emigrate to Colorado, the Cape, or Australia. So frequently does this occur that doubts arise whether those who give the advice in any degree realise what they are recommending.

The natural inquiry to follow the narration of any of the foregoing suggestions is, "Have you a trade and, if so, what can you earn?" A large proportion of hospital patients are unskilled labourers but when such a one has a trade it may be found that he earns £2, at times perhaps even £3, a week. If he be then further asked whether he has any skilled knowledge of outdoor work, it almost invariably appears that he has not and that some 15*s.* to £1 a week is all he could hope to earn in very favourable circumstances. Whether, then, is it wiser for that man to return to an occupation at which he has a definite market value or to go out among the flotsam and jetsam of unskilled, often unemployed, even though nominally open-air workers? Two points have to be borne in mind—the safety of the community and the welfare of the individual. As regards the former, it may be affirmed that there is no risk apart from the drying up of expectoration which allows the living bacilli to be blown about as dust. Fraenkel's recent work has shown that the risk of infection, even in the immediate proximity of the patient, from the spray inevitably produced by coughing is so small as to be nearly negligible, and, indeed, were it not so it is difficult to see how the *personnel* of a hospital for consumption could reside therein for years and yet remain free from the disease.

The extreme popular view of the contagiousness of consumption with the naturally associated tendency to treat all sufferers as lepers is unjust, unwarranted, and an economic error. It may be that the disease in any individual has been arrested, that he has no expectoration, or if any that it has by repeated examination been found to be free from tubercle bacilli; such a person could with safety to others be sent to work in any surroundings. Even a quiescent case who has not advanced so far towards recovery is of very little danger, provided that he has been educated to use a sputum flask and can be trusted not to spit about or let his expectoration dry but to attend to its safe bestowal—that is, if he is an ordinary careful intelligent human being. It is also to be remembered that an arrested case of pulmonary tuberculosis returning to an indoor occupation will be an apostle of the advantage of leading a better hygienic life and so should by his example and precept tend towards diminishing the prevalence of the disease.

For the welfare of the individual the most important considerations are the provision of fresh air at home, good food, and reasonable hours and conditions for rest; in other words, an ordinary healthy life out of working hours. This can only be obtained at a price, hence the necessity to earn the best possible wage. No amount of fresh air during work will compensate for the lack of sufficient nourishing food or bad accommodation during the rest of the day; there is a certain tendency to forget that starvation is a more serious trouble than tuberculosis.

Two of the greatest risks to the patient whose disease is arrested are overstrain and great fatigue which appear to have a very special influence in bringing on a recrudescence. From this standpoint it would seem preferable that any patient who is a skilled workman should return to his former occupation, for what can be done with facility will be done with the least unnecessary expenditure of energy. The hardest and most continuous manual labour usually falls to the lot of the unskilled labourer, such as any artisan would become should he leave his trade. Although it has been shown by sanatorium experience that those who have led sedentary lives are capable, despite their affliction, of being trained up to do hard manual labour to their physical benefit and without any harm soever resulting, this is only because the hours of such work are regulated and periods of rest interposed in a manner impossible in everyday life. We do not by this mean to suggest that manual labourers accustomed throughout their lives to such toil cannot return to their occupations, but rather the contrary, since such work comes easier to them.

From the statistics of the German sanatoriums it would appear that cases discharged as quiescent or arrested are capable of returning to their former occupations for periods of three, four, or more years and nowhere are there any definite facts to show that this is not equally possible in this country. An arrested case should be safer, whatever his occupation might be, than he was before he acquired his illness, since he has learnt how to live in the healthiest possible manner. For the same reason a quiescent case should be no worse off than before.

Fresh air throughout the whole day is no longer so essential once the processes of disease have become quite quiescent. Less good air will then suffice for a time provided it be not absolutely deleterious, and if it be it is wrong that anyone should work under such conditions. The skilled man who at his own trade could earn a fair competence would have to work longer hours and at a greater strain in an outdoor occupation for a wage which would scarcely support life, since he would have to compete in the labour market against those who, having been born and bred to the work, would naturally secure all the better posts. The problem of the clerk, shop-assistant, and warehouseman must be considered in the light of the same reasoning—the relative economic value of his work, his wage-earning capacity in relation to the cost of living,

and his surroundings when off duty. He must earn sufficient to enable him to procure reasonable conditions out of working hours. Vanmen, tram and omnibus drivers and conductors, and most classes of railway servants could not do better than remain at their occupations. As regards the unskilled labourer there is no *a priori* reason why he should not go into the country to look for work but in recommending such a course it must be remembered that this is very difficult for even a perfectly healthy man to obtain.

It should not be forgotten that many patients suffering from pulmonary tuberculosis in a more or less active stage, often with tubercle bacilli in their sputum, remain at in-door work, at the same time attending the out-patient departments of our hospitals. It must be the experience of many that these individuals continue to work under such conditions for many years, so that there is a reasonable prospect that had they had the advantage of the hygienic education and the improvement of their general health, to say nothing of some degree of arrest of the primary disease which would have followed in-patient treatment, they might have remained self-supporting for an indefinite period.

The alternatives to following his own trade usually suggested to a patient, as we maintain frequently without due consideration, are: (*a*) to obtain some open-air occupation, preferably in the country, in which case gardening is usually recommended; (*b*) emigration; and (*c*) going to sea. These may be briefly dealt with *seriatim*.

(*a*) Many patients shortly before their discharge from hospital talk of looking for some such open-air occupation, but on being pressed appear to have no idea what variety of work they require nor how to proceed to find it. From the stories of patients re-admitted to hospital after some lapse of time it appears that if they have remained in town a large number have become tram and omnibus conductors, frequently with good results. This course, however, cannot be recommended save to those with little or no expectoration, since a man making use of a spitting flask would almost certainly be complained of by some zealous passenger and would stand little chance of obtaining further employment. The wages earned are also not excessive. In spite of these objections this occupation is one of the most suitable for an unskilled patient. Others have tried to serve as insurance agents or travellers on a small scale. These more often than not have proved failures both economically and medically. Want of knowledge of their business has prevented their earning enough to live decently and at the best an agent's life about town is far from being in the open air but rather involves the risk of exposure to all kinds of infection in the houses he must visit. Also it is our experience that there is a tendency for such men to indulge too freely in alcoholic stimulants, a course productive of great evil in cases of pulmonary tuberculosis. Patients but rarely appear to have endeavoured to act as gardeners for obvious reasons. If more than a mere pittance is to be earned some degree of technical skill is required, to acquire which a proper apprenticeship must be served. It is as absurd to expect an untrained patient at once to become fit for such an occupation as it would be to advise him to act as a fully trained druggist. Another feature which militates against gardening as a suitable trade for consumptive individuals is that to earn a fair wage a gardener must have a knowledge of, and carry out, hot-house work, whereby he runs grave risks of catarrhal attacks which probably predispose towards a recrudescence of the pulmonary tuberculosis. For the beginner employment is uncertain and the accommodation for the labourer and his family is often of an unsatisfactory nature. In addition to which it is improbable that in the country the other members of the family would be able to do much to add to the income, and if they are dependent on the patient as sole bread-winner their fare will be scanty.

(*b*) Emigration opens up still more serious problems. When a patient seeks advice on this subject the most important question to ask is, Has he definite employment to go to and, if so, are the wages such as reasonably to support him under the prevalent local conditions? Failing work, definitely arranged for in advance, has he friends to stay with who will keep him until he can obtain employment? Also, Has he a knowledge of any trade or other occupation for which there is a demand? If these questions be answered in the negative such a patient should be advised not to go, however much a climatic change might be expected to benefit him. His health might not improbably suffer on the voyage and his slender capital be rapidly exhausted while in search of employment. Everyone who has been to the colonies must have seen some such half invalids reduced to extremities. It is often overlooked in England that it has been found necessary to establish sanatoriums in South Africa, Australia, and Canada, the very places to which our consumptives are advised to emigrate. To emigrate with inadequate means and without definite prospects is a task not lightly to be undertaken successfully even by those in perfect health and with some useful knowledge; far less, then, by one town-bred, just recovering from a severe illness and without experience of outdoor work. If, however, the patient has a post offered him in advance or friends to go to his state of health can be considered in relation to emigration. Should his disease be arrested no obstacles need be placed in his way other than to warn him that he is going far from home and may be in difficulties should he relapse. If the disease be only quiescent the case must be put much more strongly and the patient should thoroughly understand the meaning of the risks which he incurs. The conditions thus far being satisfied inquiry may be made as to where he proposes to go. Many patients will be found who have the haziest notions of geography and believe that all places out of England are health resorts. They believe the supposed climate is everything and are unaware of the distances and variations met with in all the colonies, the United States, and the Argentine, many parts of which are climatically inferior to England. They cannot realise that Northern Territory is not Darling Downs, Durban not the Drakensberg or the Karroo, Quebec or Chicago not the slopes of the Rockies; that it is not as healthy to serve in a store at Denver as to be ranching, to tend behind a bar in Johannesburg as to farm. Lastly, the economic aspect should be again clearly placed before every patient desirous of going abroad, since many deceive themselves as to the relative value of wages. Especially is this the case with regard to Johannesburg, where all the necessities of life are so much dearer that even with better wages many—nay, most—artisans write home that they are really worse off than in England and in some cases though in full work find themselves without sufficient money to procure proper food.

(*c*) Going to sea is perhaps less frequently advised than a few years back. Most patients who mention going to sea propose to do so in some working capacity. This on investigation resolves itself into seeking a berth as ship's steward or, in the case of clerks with somewhat better attainments, as a purser's assistant. Now, however much, or little, open air a passenger in a liner may secure neither of the above categories could be described as sharing therein. That all who go to sea spend their time on deck fanned by appetising salt breezes is a pure popular delusion. The purser's assistant usually spends his days in a small, very stuffy cabin whether at sea or in port; his nights under similar conditions. The steward lives in still worse quarters—crowded out, heavily worked, with few opportunities for sleep, and in the tropics the chances are poor enough for anyone. At the beck and call of everyone, with little time off duty, he lives practically between decks in adverse circumstances everywhere and always. The popular idea is that stewards, however bad their quarters—and they are usually so near the water-line that the scuttles can never be opened—have always the opportunity of sleeping on deck. Now, in bad weather, when their quarters are naturally at their worst, this is obviously impracticable. As tuberculosis is far from uncommon among ship's stewards anyone following this occupation must pass his time of rest in an ill-ventilated and infected atmosphere. This is the more so as any one desirous of keeping his berth would be unable to use a spitting-flask, which would be detected, and so must either swallow his expectoration at his own risk or use his handkerchief, to the risk of others when the sputum dries and the bacilli escape as dust.

Our conclusion is that so far as possible each individual should return to his own trade and that those without a trade should be largely governed in the selection of an occupation by their wage-earning capacity thereat. If the only result of the treatment of pulmonary tuberculosis be the production of large numbers of unskilled outdoor labourers can this be considered an economic success? The matter is one over which there must obviously be some difference of opinion and we set forward our views in the hope that they may at least draw attention to the subject and so help the unfortunate consumptive to be advised thoughtfully as to his future.

THE PASSAGE OF SPIROCHÆTA DUTTONI FROM MOTHER TO FŒTUS.

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IN a publication on *Spirochæta obermeieri* Albrecht states that he found the parasites in four fœtuses, seven months old, from mothers who were suffering from European relapsing fever. Spitz made a similar observation in the case of a five-months' fœtus, finding the parasites in an intracranial hæmorrhage. In our experimental work on *Spirochæta duttoni*, the organism of African relapsing fever, we have been able to demonstrate the passage of the parasites from mother to fœtus in the case of four rats and one guinea-pig.

Experiment 1082 C.—Rat inoculated on April 3rd, 1906, with heavily infected blood. After showing spirochætæ for 16 consecutive days it was killed for subinoculation. The heart blood showed from 20 to 30 parasites to a field (Zeiss $\frac{1}{12}$ oil immersion, No. 4 ocular). The heart blood of three half-grown fœtuses and that of their placentæ were examined with the following results:—

Placenta I., 1 to 2 spirochætæ per field: Fœtus I., 1 spirochæta to film
„ II., 6 „ 8 „ „ „ II., 4 spirochætæ „
„ III., 1 „ 3 „ „ „ III., 1 spirochæta „

Film preparations of the brain, bone marrow, and spleen of one fœtus were examined. Parasites were found only in the preparations from the spleen.

Experiment 1084.—Rat inoculated on April 6th. Three days later, when the blood contained innumerable spirochætæ, it was killed. The fœtuses (seven) were nearly mature. The placentæ were darker in colour than usual but otherwise presented no macroscopical changes. In blood from the uterine vein the spirochætæ were present in very large numbers and in the placental blood they were in such numbers that in the preparation nothing but large bundles of spirochætæ could be seen. In preparations from the umbilical vein one spirochæta was seen in from 5 to 30 fields. The fœtuses showed varying numbers, on an average one to three fields, though in some fields as many as ten spirochætæ could be counted.

Experiment 1178 C.—Rat inoculated on May 26th and killed three days later, when the heart blood showed from 70 to 100 parasites to a field. The fœtuses (seven) were nearly mature. The blood in the uterine vein showed about the same number of parasites as the heart blood.

Placenta.	Umbilical vein.	Fœtus.
I. 80 to 100 per field.	1-5, 1-9, 1-30 fields.	Negative.
II. 30 „ 40 „ „	—	„
III. 10 „ 40 „ „	1-2, 1-4, 1-48 fields.	1 in film.
IV. 3 „ 30 „ „	2-1, 1-6 fields.	1 „ „
V. 30 „ 100 „ „	1-7, 1-78, 1-90 fields.	2 „ „
VI. 30 „ 100 „ „	—	2 „ „
VII. 10 „ 40 „ „	1-57, 1-70, 1-100 fields.	3 „ „

Subinoculations were made from this rat and the fœtuses to ascertain whether the spirochætæ in the fœtal circulation were still infective and as virulent as those in the maternal blood.

Experiment 1182.—Two rats were inoculated from the mother. Both showed many parasites in the peripheral circulation after an incubation period of four hours and passed through the usual course of the infection.[1] Another rat inoculated with three cubic centimetres of citrated heart blood from three of the fœtuses showed two spirochætæ in a preparation of the peripheral blood after an incubation period of six hours. No parasites were seen for the next two days, but on the fourth day they were again present and the rat then passed through the ordinary course of infection.

Experiment 1238.—Rat inoculated on July 3rd and killed three days later. The heart blood showed from one to two spirochætæ per field. Preparations from the heart blood of ten half-grown fœtuses were examined and parasites were found in very scanty numbers (never more than two to a thick film) in eight of these. In the placental blood there were on an average from one to two spirochætæ per field.

Experiment 1232.—Pregnant guinea-pig. Inoculated on May 13th and became infected after an incubation period of six hours. It died on May 18th and although no spirochætæ were seen in the blood preparations made after death a subinoculated rat showed the parasites on the following day. The two fœtuses were about three-quarters mature. Although preparations of their blood were examined carefully no parasites were found but the inoculation of a rat proved positive after a prolonged incubation period of six days and the infection ran its usual course.

In order to see whether there exists any inborn immunity two young rats, from four to five weeks old, born while the mothers were heavily infected, were inoculated with blood containing spirochætæ. They showed no immunity but became infected and passed through an attack identical with that observed in normal rats of the same age. On a third rat ticks were fed and the parasites appeared in the peripheral circulation after five days, the usual incubation period.

The above experiments lead to the following conclusions: 1. *Spirochæta duttoni* passes through the placenta from the circulation of the mother to that of the fœtus. 2. The majority of the fœtuses carried by an infected mother are themselves infected. 3. The parasites are found in the placenta in approximately the same numbers as in the maternal heart blood, but, on the contrary, occur in very scanty numbers in the fœtal circulation. 4. The spirochætæ in the fœtal circulation show no morphological changes. 5. Infected pregnant rats show no tendency towards abortion, but few of their young, in comparison with those from healthy mothers, reach maturity. 6. The young born of infected mothers possess no marked inborn immunity against infection either by means of direct inoculation or through the bites of ticks.

[1] Breinl and Kinghorn: Observations on the Animal Reactions of the Spirochæta of the African Tick Fever, THE LANCET, March 10th, 1906, p. 668.

A CASE OF CARDIAC SYPHILOMA WITH BRADYCARDIA AND OBSTRUCTION OF THE INFERIOR VENA CAVA:

THE AFTER-HISTORY AND A POST-MORTEM RECORD.[1]

By CHARLES W. CHAPMAN, M.D. DURH., M.R.C.P. LOND.
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IN the session 1897-98 of this society I showed a man, aged 48 years, whose case is the subject of this communication, under the heading "A Case of Bradycardia with Obstruction of the Inferior Vena Cava." The action of the heart was slow and there was a mitral systolic murmur. There were greatly distended and varicose veins over the middle and right side of the abdomen and a similar condition was seen on the outer side of the right leg. This condition, so far as the abdomen was concerned, had existed for at least five years, while the veins of the leg had only recently become dilated. There was a history of an itching sore on the penis 20 years previously. There had been no secondary symptoms and, as the sore had been of little or no inconvenience to the patient, only a short local treatment had been adopted.

During the following session I read a paper on the same case entitled "A Case of Obstruction of the Inferior Vena Cava, probably Syphilitic." In this paper I went fully into the history of the case and detailed the conditions found on examination. A provisional diagnosis was made of obstruction of the inferior vena cava due to pressure from a gumma or to thrombosis from phlebitis. Arguments in favour of the syphilitic origin of the disease were given together with an account of the treatment adopted, the paper concluding with references to recorded cases of syphilitic affections of the circulatory system and to literature bearing on the subject. The account of the case when exhibited and the report of the paper are to be found in Vols. XXXII. and XXXIII. of the Transactions of the Clinical Society.

Up to May 6th, 1905, the man had been a more or less constant attendant at the out-patient room, which means that I had him under observation for eight years, and that he had had dilated abdominal veins for nearly 14 years. There was nothing special to note beyond that he was for the greater part of the time under iodide of sodium, that the pulse-rate ranged between 33 and 44 to the minute, and that there was an entire absence of syncopal attacks. He was never well

[1] A paper read before the Clinical Society of London.

if the treatment was suspended for more than two or three weeks. He was able to continue his work until his fatal illness.

Early in June, 1905, I was informed that the patient had been admitted into the London Hospital for suppurating appendicitis and that an operation was performed but that he succumbed shortly afterwards to general peritonitis. I at once communicated with the hospital authorities, and it is mainly owing to their courtesy that I am able to give the following account of the post-mortem examination :—

"The abdomen was distended and covered with varicose veins. On opening it there was evidence of appendix abscess and general peritonitis. In the pleuræ there were a few thin adhesions about the right apex and both cavities were dry. At the apex of the right lung there was a patch of obsolete tubercle. The root of this lung with the neighbouring vessels, glands, and mediastinal tissues were firmly matted into a mass of fibro-calcareous material. The rings of the larger bronchi of the right lung were calcified. The pericardium contained an excess of clear fluid. The two surfaces were free. There was great increase of epicardial fat over the right auricle and at the base of the heart. Over the left ventricle and auricle the pericardium was thick and opaque in places. The heart was pyriform in shape, the right side being about the same size as the left; it weighed 15 ounces. The heart muscle was brown and tough with visible strands of fibrous tissue running through it. The left ventricle was dilated but not hypertrophied; the right ventricle and auricle were dilated and contained a small black clot. The cavity of the left auricle was greatly dimini-hed and constricted in its middle to a ring which just admitted the tip of an index finger. The cause of this narrowing was a dense calcareous mass situated beneath the endocardium. This condition of calcification affected the whole circumference of the left auricle, the interauricular septum, the aortic sinus, and first inch of the aorta, being in all places deep. The interventricular septum was thick and muscular.

The valves.—The mitral curtains were thin and pliant, but just above the mitral orifice the left auricle was narrowed by the ring already described. The aortic cusps were thin and pliant. The pulmonic and tricuspid valves were natural. The coronary arteries were narrowed at their orifices but further down were unchanged. The aorta contained many patches of atheroma.

Summary of the condition of the heart.—The calcareous mass produced a condition amounting to mitral stenosis; it also narrowed the left auricle, partially occluded the coronary vessels, and affected the interauricular septum. There was great fibrosis of the myocardium.

The kidneys, beyond a few cortical cysts, presented no gross changes. The liver weighed 56 ounces; it was firm and bile-stained. The left testicle presented a typical diffuse fibrous gummatous condition.

Microscopical examination.—Sections were cut of the heart muscle and left testicle. The condition of the latter confirmed the macroscopic appearance of gumma. The heart muscle showed an advanced general diffuse fibrosis. The walls of the main division of the coronary artery were apparently natural, but there was considerable increase in the adventitia of the smaller arterioles. There was no obliterative proliferation of the intima."

There are two points that may be specially noted. 1. That the initial lesion was so insignificant to the patient that but little treatment was adopted. 2. It is probable that the disease was still in progress when the patient first came under my care in 1897, at which time a lump of the size of half a walnut at the back of the neck was noted and which completely disappeared under mercurial treatment. The prolongation of the patient's life may fairly be attributed to the recognition of the true nature of the case and the vigorous and prolonged treatment.

It is an interesting question whether the bradycardia which had been present for at least eight years was due to myocardial invasion with gummatous deposit and subsequent fibrosis or to an early implication of the orifices of the coronary arteries. The affection of one testicle only is in accordance with the observations of Wilks and Moxon who considered that the unilateral presence of gumma is a ready indication of syphilitic taint.

Attention may here be called to a valuable paper on Cardiac Syphiloma by Sir Dyce Duckworth in Vol. XXIX. of the Transactions of the Clinical Society. I would particularly refer to the author's closing remarks which I cordially endorse, for they voice the reason and apology, if need be, for bringing this case to your notice for a third time. They are: "The great object is to recognise the nature of the disease as soon as possible and treat the patient by large doses of iodide of potassium. On these lines the best results may be anticipated."

Weymouth-street, W.

GANGRENE OF BOTH FEET AND LEGS DUE TO EMBOLISM AND THROMBOSIS OF THE ABDOMINAL AORTA IN ITS ENTIRE EXTENT, THE RESULT OF MITRAL STENOSIS AND CONSECUTIVE CARDIAC THROMBOSIS.

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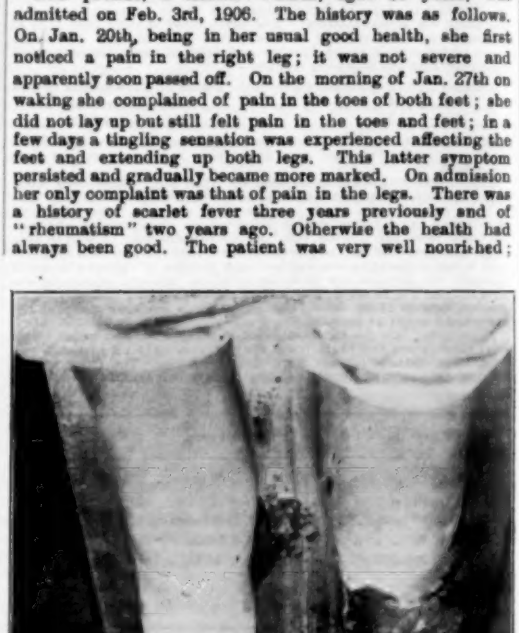
THE patient, a married woman, aged 50 years, was admitted on Feb. 3rd, 1906. The history was as follows. On Jan. 20th, being in her usual good health, she first noticed a pain in the right leg; it was not severe and apparently soon passed off. On the morning of Jan. 27th on waking she complained of pain in the toes of both feet; she did not lay up but still felt pain in the toes and feet; in a few days a tingling sensation was experienced affecting the feet and extending up both legs. This latter symptom persisted and gradually became more marked. On admission her only complaint was that of pain in the legs. There was a history of scarlet fever three years previously and of "rheumatism" two years ago. Otherwise the health had always been good. The patient was very well nourished;



The illustration shows the general appearance of the gangrenous lesion.

the complexion was very slightly dusky. Both legs and feet could be freely moved; both were cold and in several localities the skin of the lower extremities was the seat of purplish red patches. There was more or less definite loss of ordinary sensation as high as the knees, but the sensation of heat and cold was retained. The sense of pain was greatly dulled over the left foot and leg, less so on the right side. The skin over the gluteal region was partially anæsthetic and of a purple tint. No pulsation could be felt in either femoral artery and none could be made out in the abdominal aorta, though this was of but little significance on account of the thick layer of fat deposited in the abdominal walls. The heart sounds were entirely free from murmur of any kind and no thrill could be detected on palpation. The apex of the heart could not be clearly defined and the superficial cardiac dulness was very ill-marked. The blood pressure, taken with the Riva-Rocci sphygmomanometer on admission, was 115 millimetres. The urine was of specific gravity 1022; it contained a trace of albumin but no sugar. The temperature on admission was 98° F.

The pain in both legs gradually became more severe and on Feb. 9th the patient could not sleep on account of it, hypodermic injections of morphine being required. The skin over the feet and the legs was now distinctly darker and a few days later the feet had passed into a mummified condition, being also quite black and insensitive. The gangrenous process was now extending somewhat rapidly but more so in the left leg where the skin was more or less discoloured up to the knee. Bullæ had formed in several localities over the gangrenous portions. On Feb. 14th the pulse was noticed to be slightly intermittent. The necrotic process became gradually more marked and on Feb. 26th the feet and a portion of the legs were completely black and powerless; there was complete anæsthesia over the feet and lower third of the legs. The pulse became once more regular and fairly strong; neither murmur nor thrill could be made out on examination of the heart. On account of pain and general restlessness morphine injections were necessary two or three times a day. The temperature continued fairly normal but rose occasionally to 101° at night.

On March 14th there was a purple area about two and a half inches across over the lower third of the right thigh and sensation was markedly impaired over this thigh. Areas of ulceration had now appeared over the left thigh and in the sacral region. Above the left knee and on the inner surface of the left thigh a purplish area was extending upwards and the same thigh was almost in its entire extent red and brawny. The skin over the feet and legs up to the knee on the left side and to the middle third of the right leg, was completely black, the whole being gangrenous. Pain was now much less marked, morphine being seldom required. The pulse now became intermittent and a systolic murmur at the apex was audible. On March 22nd the patient was wandering mentally and the temperature had been somewhat raised (highest 101°) during the few preceding days. She now became very noisy and shortly wildly delirious. The condition of the lower extremities remained unaltered. The pulse became very weak, rapid, and intermittent and death ensued from exhaustion on March 27th.

Necropsy.—At the post-mortem examination it was found that the left auricle was considerably dilated. The left ventricle was somewhat dilated and contained post-mortem clot; the left auricle contained semi-decolourised clot, easily removeable, and also a yellowish-grey polypoid mass of about the size of a walnut. This was firmly adherent to the auricular wall at the side of the opening into the appendix; the communication between the auricular cavity and the appendix was completely occluded by this body. The mitral orifice was stenosed, being of the button-hole variety. The cusps were firmly welded together, but there was scarcely any thickening and the edges of the stenosed orifice were not rigid. There was no evidence of recent inflammation. The whole extent of the abdominal aorta just below the origin of the cœliac axis to the point of bifurcation was completely occluded with firm clot which distended the vessel. Both common iliacs were occluded; also the left external and internal iliac and femoral arteries. On the right side the obstruction ended with the termination of the common iliac. The cœliac axis was quite free from clot; all the other branches of the abdominal aorta were blocked at their origin but the lumen was free from this point. The clot filling the abdominal aorta was very firm and was decolourised. Evidence of previous embolic plugging was present in both kidneys in the form of several depressed scars beneath the capsule, the loss of substance extending for about a quarter of an inch into the renal cortex. The lungs were œdematous; all the remaining organs were healthy.

It is well known that of all valvular lesions mitral stenosis is the most liable to be attended with symptoms of embolism. That such symptoms had occurred in the present instance is clear from the condition of the kidneys, which, as will be found on consulting the account of the post-mortem appearances, had been the seat of bygone embolic infarction. There can be no doubt that the heart lesion was directly responsible for the very unusual physical signs observed in this case. Instances of double and simultaneous gangrene of the lower extremities are very far from being of ordinary occurrence and when a case of this kind is met with in all probability the first cause of the condition to suggest itself would be diabetes mellitus. So it was in the present instance. But the urine contained no sugar and all symptoms of diabetes were absent. Then the possibility of extensive and severe atheromatous degeneration of arteries would be entertained; but here, again, there was not the least evidence of this cause of senile gangrene being effective. As far as could be ascertained all the arteries excepting those directly involved were in a healthy state.

The possibility of the lesion being of an embolic nature was not lost sight of and the heart was repeatedly examined. Yet no evidence of cardiac disease could be detected and although, late in the progress of the case, a systolic murmur became audible at the apex, yet there could be little doubt that this was the murmur of failing heart action and due to slight dilatation from this cause.

The entire absence of thrill, of presystolic or other murmur occurring during the diastole, and of reduplicated second sound is certainly remarkable and is a further proof, if such was wanting, that it is impossible in not a few instances to diagnose mitral stenosis, even when the lesion is present in a marked form.

It must surely be excessively rare for such a complication of mitral stenosis as plugging of the abdominal aorta and most of its branches to occur, but there can be no question that the valvular lesion was in the last degree responsible in this case. The presence of the cardiac "polypus" in the left auricle would appear to explain the *modus operandi*. Clearly, either a portion of this coagulum or a similar but much smaller mass must have become free in the blood stream, must have passed through the constricted mitral orifice, and thence must have gained the aorta. That the embolus was of some considerable size seems clear from its obvious extent in the vessel and it would appear to have formed a nucleus for subsequent extensive thrombosis, leading ultimately to the blocking of the abdominal aorta in its whole extent. This case certainly has an important bearing on the somewhat neglected subject of cardiac thrombosis and the relationship of the latter to mitral stenosis.

To Mr. T. W. N. Dunn and Mr. R. Brown, house physicians, I am indebted for the notes from which the history of the case has been abstracted and my best thanks are due to Mr. Alan Hair for his kindness in enabling me to reproduce the general aspect of the lesion from his photograph of the same.

Wimpole-street, W.

A CASE OF GALL-STONES OF LARGE SIZE PASSED BY THE RECTUM.

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THE following case is one of considerable interest, not only on account of the large size of the gall-stones themselves, but also from the fact that they were passed by the patient per rectum, after, in all probability, ulcerating their way through the fundus of the gall-bladder into the transverse colon at or near the hepatic flexure.

The history of the case is briefly as follows. The patient, a female, aged 60 years, was under the care of my father, Dr. George Dickson, to whom I am indebted for the specimens. On July 30th, 1903, while in the country, she

was suddenly seized with epigastric pain which became very severe towards morning. A medical man was called in next day and observed that she was slightly jaundiced. The pain subsided during the subsequent day, August 1st, and she was able to go out. During the following night, however, the pain again supervened, accompanied by nausea and vomiting. This condition remained for about a week and then gradually disappeared. The pain, however, returned about a month later, reappearing on Sept. 11th, 1903, and remained present more or less continuously for seven months, a specially severe attack occurring in February, 1904. After this date she felt comparatively well until November, 1905, when she had another short attack of abdominal pain and uneasiness, which lasted more or less till Jan. 14th, 1906, about which time she began to have great difficulty in obtaining passage at stool. On Jan. 19th my father was called to see the patient and on rectal examination found a large, firm, rounded mass, apparently composed of hardened fæces, impacted in the rectum just above the opening of the anal canal and obstructing the outlet. This mass was with some difficulty extracted and its nucleus, after being washed free from the clay-like fæces which surrounded it, proved to be a large gall-stone, $1\frac{7}{16}$th inches in length, somewhat paraboloid in shape, with a single, large, flat, circular facet, $1\frac{13}{16}$nd inches in diameter, representing the base of the cone. This stone, which is represented on the right side of the photographs, weighed when dried 14·5 grammes.

After the evacuation of this stone the patient remained well until April 6th, when she had a severe attack of pain all over the abdomen; and on the 14th a large, firm, tumour like mass was felt in the left lumbar and iliac regions, its upper margin being on a level with the umbilicus. This mass was moveable and copious enemata were administered in the belief that, as the first gall-stone was faceted, this mass was in all probability due to the presence of one or more gall-stones surrounded by fæces and situated in the descending colon and sigmoid flexure. Mr F. M. Caird, who was called in for consultation, confirmed this diagnosis and advised the continuance of the treatment by enemata, together with the administration of olive oil by the mouth, there appearing to be no immediate necessity for any operative interference, a course which was amply justified by the fact that during the night of May 10th my father on being called to see the patient, found the two remaining gall stones shown in the photograph impacted in the rectum. These were extracted and, probably owing to the method of treatment employed, were not on this occasion surrounded by the clay-like fæces described as encasing the first stone. These two stones were also faceted and, along with the stone previously passed, fitted together to form a complete cast of the interior of the gall-bladder (see illustration). The stone first passed, and already described, was probably situated at the fundus and was the first to ulcerate into the bowel. The middle stone formed a short cylinder. $\frac{1}{2}\frac{3}{4}$ inch long and $1\frac{5}{16}$ inches in diameter, and showed a flat facet on each side, one of which fitted the facet of the first stone the other fitting a corresponding surface on the base of the third. The last-mentioned stone somewhat resembled the first in shape, with the exception that it had a curved, bulbous projection at one end which evidently fitted into the dilated upper part of the cystic duct. The stones are dark brown in colour, being composed mainly of bile pigment and cholesterin, and on the surface there is a layer of white crystals of cholesterin, giving them somewhat the appearance of having been powdered over with crystals of coarse sugar.

The main interest of the case lies in the fact that gall-stones of such large size were evacuated from the gall-bladder by natural means, and that they had evidently ulcerated their way through the fundus of the gall-bladder into the large intestine after these two organs had become attached to each other by adhesions. They had then passed very slowly down the large intestine, and had become surrounded by a mass of clay-like fæces which led to partial obstruction of the bowels, relieved by the repeated use of large enemata. That they passed down by the cystic and common bile-ducts is very improbable, there having been no severe attack of jaundice, and moreover the stone which formed a cast of the fundus of the gall-bladder was the first to appear in the rectum, and preceded the others by about four months. Ulceration into, and passage by way of, the small intestine is also excluded by the clinical history, and stones of such large size, if they had travelled by the last-named route, would almost certainly have become impacted at the ileo-cæcal valve. A small ischio-rectal abscess formed a few days after the first stone was passed, probably from fissuring of the stretched mucous membrane of the anal canal and infection with organisms. This was opened—about one and a half ounces of pus being evacuated—and rapidly healed up; and the patient is now in good health.

Reproduction of photograph (natural size) showing shapes and facets of the gall-stones. The stone on the right was that passed first. The stones when fitted together made a mass three and a half inches long, forming a complete cast of the interior of the gall-bladder. The bulbous projection on the left side probably fitted into the dilated upper end of the cystic duct.

Measurements and Weights of the Stones.

—	Diameter.	Length.	Weight (after drying).
	Inches. Mm.	Inches. Mm.	Ounces. Grammes.
First stone passed...	$1\frac{3}{4}\frac{7}{2}$ = 36	$1\frac{5}{16}$ = 33	0·51 = 14·5
Middle stone	$1\frac{5}{16}$ = 40	$\frac{3}{4}\frac{4}{2}$ = 24	0·67 = 19·0
Last stone	$1\frac{7}{16}$ = 36	$1\frac{3}{8}$ = 35	0·52 = 15·0

Total length when fitted together, $3\frac{1}{2}$ inches (89 millimetres) total weight after drying, 1·71 ounces (48·5 grammes).

Edinburgh.

THE ELECTRICAL RESISTANCE OF THE BLOOD AND URINE AS A TEST OF THE FUNCTIONAL EFFICIENCY OF THE KIDNEY.

BY DAWSON F. D. TURNER, M.D. EDIN., F.R.S. EDIN.,
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IN a communication made to the Royal Society of Edinburgh on Dec. 21st, 1891, I gave an account of the experiments I had made to ascertain and compare the electrical resistances of various kinds of urine both in states of health and of disease. The fluids were held in a U shaped electrolysis tube containing two disc shaped platinum electrodes arranged so as just to rest upon the surfaces of the fluid, 21 cubic centimetres of which were used for each experiment. The measurements were made by Kohlrausch's method and at a temperature of 65° F.

As a result of the observations, which extended also to artificial urines, it was found that the specific resistance of a normal urine amounts to about 45 ohms and that the resistance is a measure of the salts, chlorides, phosphates, sulphates, &c., present in the urine; the greater the concentration the less the resistance and *vice versâ*. In disease the resistance was found to be increased chiefly in acute croupous pneumonia (due to the diminution in the chlorides), in diabetes mellitus, acute and chronic Bright's disease, and in pernicious anæmia. As it is believed that the glomeruli are mainly responsible for the presence of salts in the urine, a high electrical resistance, other things being equal, would indicate an impairment of the function of the glomeruli.

Within the last ten years I have made many attempts to measure the electrical resistance of the blood; various methods (dilution with distilled water, measurement of a column of blood in a capillary tube, &c.), have been employed and subsequently rejected. The principal difficulty depends upon the fact that only very small quantities of blood can generally be obtained at one time. The best results were obtained by placing five cubic millimetres of freshly drawn blood between two cup-shaped electrodes three millimetres in diameter, coated with spongy platinum and fixed at 0·75 millimetres apart. The length of the cylinder of blood between the electrodes is of less importance than its diameter because the cross-sectional area varies with the square of its diameter, and the resistance of a conductor varies directly as its length and inversely as its cross-sectional area. By employing electrodes of fixed diameter and at the same distance apart and the same quantity of blood for each observation and by making the measurement at once before such changes as coagulation or evaporation could occur fairly consistent results were obtained. The average specific resistance of normal blood measured in this way is 93·5 ohms but it may fall to 85 or rise exceptionally to 130. The resistance depends again upon the salt concentration of the blood.

A striking change is to be observed in pernicious anæmia, the resistance in this disease being usually about one-half (50 ohms) that of normal blood. The deduction is that the blood in this disease contains an abnormal amount of salts due either to destructive metabolism or to renal inefficiency or to both. Light is thrown on this question by examining the resistance of the urine; this will be found to be abnormally high, hence we have the striking fact that while the urine contains too few salts the blood contains an abnormal amount. This, then, is a clear case of renal inefficiency. In view of this fact (impairment of the glomerular function of the kidney) the pathology and treatment of pernicious anæmia require reconsideration. These results obtained some years ago and the introduction of cryoscopy have led me to compare this method of determining the renal efficiency with that of cryoscopy and to originate a ratio which I will call "The Hæmo-renal Salt Index"—viz.,

$$\frac{\text{The electrical resistance of the blood.}}{\text{The electrical resistance of the urine.}}$$

In health this would be equal to two or three whole numbers, e.g.,

$$\frac{\text{R. of blood}}{\text{R. of urine}} = \frac{93\cdot5}{45} = 2\cdot08.$$

If this number increases it indicates that the blood contains fewer salts and the urine more and that the functional activity of the kidney is increasing; if, however, the hæmo-renal salt index diminishes it indicates that the functional activity of the kidney is diminishing. Thus in a bad case of pernicious anæmia the salt index is less than one, it is a fraction, but with an improvement of the patient it will at once increase and with his recovery it will return to normal. Here are some illustrations.

CASE 1.—A. B.; healthy.

$$\frac{\text{R. of blood}}{\text{R. of urine}} = \frac{119}{38\cdot25} = 3\cdot1 = \text{hæmo-renal salt index.}$$

CASE 2.—M.; advanced pernicious anæmia; patient under the care of Dr. G. A. Gibson; examined in July, 1906.

$$\frac{\text{R. of blood}}{\text{R. of urine}} = \frac{40\cdot8}{68} = 0\cdot6$$

CASE 3.—A. D.; pernicious anæmia with many relapses; a patient under the care of Dr. A. James; examined in February, 1902.

$$\frac{\text{R. of blood}}{\text{R. of urine}} = \frac{51}{115} = 0\cdot44 = \text{index.}$$

CASE 4.—A. B.; secondary anæmia; patient under the care of Dr. Gibson; examined July, 1906.

$$\frac{\text{R. of blood}}{\text{R. of urine}} = \frac{85}{56\cdot1} = 1\cdot5 = \text{index.}$$

CASE 5.—A. T.; chronic rheumatism; patient under the care of Dr. Gibson. Index 3·3.

CASE 6.—W.; chronic interstitial Bright's disease; patient under the care of Dr. Gibson. Index 2·1.

CASE 7.—H.; recovery from pernicious anæmia; red blood corpuscles, nearly 5,000,000; patient under the care of Dr. Gibson. Index 1·7.

This method is a more sensitive, a more rapid, and a more accurate one than cryoscopy but it does not measure exactly the same thing. Cryoscopy measures the total molecular concentration and is independent of the kind of molecule provided they are not dissociated (salts, acids, and bases are exceptions). Electrical resistance depends only upon the salts, acids, and bases, and of these NaCl is by far the most important; it is practically unaffected by the presence of albumin, sugar, and other non-electrolytes.

Urea has a small effect only. The combination of cryoscopy with the determination of the hæmo-renal salt index would give us more precise information as to renal capacity than the use of either method alone; the one method should not be regarded as a substitute for the other but rather as complementary to it, but of the two the electrical method is so much more convenient and rapid that it is likely to come into extended use in the future.

I desire to thank Dr. James, Dr. Gibson, and Dr. Woodward for the help they have afforded me in the prosecution of this research.

Edinburgh.

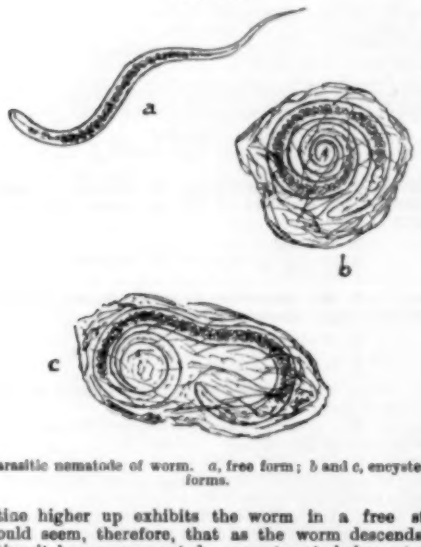
THE POSSIBLE IMPORTANCE OF EARTH-WORMS AS A FACTOR IN THE SPREAD OF DISEASE.

BY CHARLES F. FRASER, M.D. BRUX., M.R.C.S. ENG., L.R.C.P. LOND.

IN the alimentary canal of lumbricus or allolobophora a vast number of parasitic organisms exist. Thus in the forepart of the canal gregarinæ are exceedingly numerous, whilst posteriorly paramecium and other protozoa are seen. Throughout the whole length bacteria swarm, the greater number of the forms seen being bacilli. It is certain that the bacillus of tetanus must be included in the ranks of the latter. These bacilli are extruded in the worm-casts and so contaminate the grass which is subsequently eaten by the horse. It may be that the bacilli are rendered peculiarly virulent by their passage through the worm and we thus have a possible explanation of the frequency of infection amongst grazing horses.

In the posterior part of the gut a parasitic nematode is found which is of peculiar interest on account of its great similarity to trichina spiralis. The nematode exists in a free state and in an encysted form, the former being found nearer the clitellum, the latter in the immediate vicinity of the anus. Thus in a large specimen of allolobophora the last inch of its body will show encysted forms, whilst the

FIG. 1.

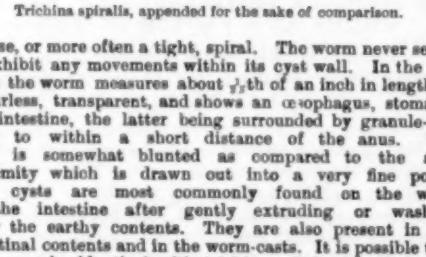


Parasitic nematode of worm. *a*, free form; *b* and *c*, encysted forms.

intestine higher up exhibits the worm in a free state. It would seem, therefore, that as the worm descends the intestine it becomes encysted preparatory to being extruded in the worm-castings.

The minute worm is just visible to the eye; the cysts are of the same size as those found in the tissues of persons suffering from trichinosis. They have an irregular, soft, transparent wall, within which the worm may be seen lying, coiled up in

FIG. 2.



Trichina spiralis, appended for the sake of comparison.

a loose, or more often a tight, spiral. The worm never seems to exhibit any movements within its cyst wall. In the free state the worm measures about $\frac{1}{12}$th of an inch in length, is colourless, transparent, and shows an œsophagus, stomach, and intestine, the latter being surrounded by granule-like cells to within a short distance of the anus. The head is somewhat blunted as compared to the anal extremity which is drawn out into a very fine point. The cysts are most commonly found on the walls of the intestine after gently extruding or washing away the earthy contents. They are also present in the intestinal contents and in the worm-casts. It is possible that these may be identical with trichina. Infection of the pig may occur from contamination of the herbage with worm-casts or the pig may eat the lumbricales themselves. Certainly this seems more feasible than the mode of entry usually put forward—viz., that the pig is accidentally infected from eating a rat that has died from trichinosis.

It will be of interest to see whether the pig can be similarly infected from these lumbrical parasites.

Cricklewood, N.W.

NOTES ON RHEUMATIC COMPLICATIONS.

BY A. D. PITHIE, L.R.C.P., L.R.C.S. EDIN., L.F.P.S. GLASG.,

HONORARY PHYSICIAN TO THE LISLE COURT CONVALESCENT HOME FOR CHILDREN.

THE following case is interesting as having complications of a rheumatic infection without the appearance of the usual symptoms of the disease itself.

The patient was a female, aged seven years. She was sent to Lisle Court Convalescent Home for Children from the Hospital for Sick Children, Great Ormond-street, on June 14th, 1906. On the 15th she was observed to have a clicking sound while speaking. On the 16th she was fidgety at meals, on the 17th unsteadiness in walking was noticed, and on the 18th choreic movements were pronounced, though slight. She was put to bed and kept there. The child remained in this condition until the 21st, when about midnight she became very restless and emotional, with dyspnœa and cyanosis. She was ordered to be isolated and given arsenic and digitalis three times a day, with five grains of trional at bedtime. The temperature was normal and the pulse was 160. She had five hours' sleep at intervals during the night. There was marked cyanosis at 3 A.M. On the 23rd the temperature was normal and the pulse was 158. Trional was given at bedtime and the patient had four and three-quarter hours' sleep at intervals. On the 24th she was still very restless, the pulse was 160, and in the afternoon the temperature ran up to 101° F. Choreic movements were very marked. An ice-bag was applied to the heart, five grains of bromide of potassium were given at 4 P.M. and 6 A.M., and trional at bedtime as before. On the 25th she had a much quieter night and the temperature came down to 98°. Up to this time there had been no indications of rheumatism but on this morning she had a perspiration with the characteristic odour of this disease. Seven and a half grains of salicylate of sodium were given every three hours as well as the trional at bedtime, and the ice-bag was continued to the heart. The evening temperature was 100·8°. On the next morning the temperature was 98·6° and the pulse was 140. Salicylate of sodium with an equal quantity of bicarbonate of sodium was given every two hours. The evening temperature was 100·4° and the pulse was 140. Choreic movements were less. Since giving the salicylate of sodium sleep had been better and the patient much quieter. On the 28th the temperature came down to normal and the pulse gradually decreased till on July 5th it was 104, at which it has continued. On the 10th the salicylate was reduced to thrice daily in the same quantity and on the 12th it was discontinued. Trional was discontinued on July 4th. The child is now convalescent.

The child had been sent to the Home for open-air treatment, having been suffering from tuberculous disease, first of the kidney and afterwards of the abdominal glands. When first seen she was found to have the cardiac apex on the level of the fifth rib and two inches to the left of the nipple line. The pulse was so rapid as to be hardly countable. The right auricle was enlarged and there was general hypertrophy of the heart muscle. The temperature was normal for several days till on the tenth day from the time the first symptom of chorea was noticed. Then it suddenly rose and with this rise appeared the sweat with the peculiar rheumatic odour. There were no pains, swelling about the joints, or red splotches anywhere about the child; nor was there anything except the rheumatic smell to indicate the presence of rheumatic infection. The cardiac enlargement was evidently of some standing and on referring to the hospital records there is a note of myocardial trouble but nothing noted as to rheumatism.

Considering the relationship between endocarditis and chorea and the dependence of these on rheumatism it strikes me that treatment of chorea and endocarditis might be carried out on the lines as if they were always due to rheumatic poison. The rapid subsidence of the symptoms and the amenability to treatment by salicylate of sodium and the ice-bag point out a method which might be more universally adopted. The plan of giving bicarbonate of sodium with the salicylate, as mentioned by Dr. F. Langmead, is a safe one even with much more enormous doses than were given in the present instance. In administering larger doses

of the salicylate it appears that the danger of acetonuria is obviated by giving at the same time bicarbonate of sodium in an equal or a larger amount. As it is necessary to test for the acetone, and such means are not always at hand to the busy country practitioner, it might be inquired whether the rough-and-ready test for alkalinity would not be to a certain extent a safeguard from acetone poisoning in cases where very large doses of the salicylate are deemed advisable.

Lymington, Hants.

A CASE OF TABES DORSALIS IN WHICH WIDESPREAD CUTANEOUS SENSORY MANIFESTATIONS COMPLETELY DISAPPEARED.

BY FREDERICK W. PRICE, M.B. EDIN., M.R.C.P. LOND.,
MEDICAL REGISTRAR TO WESTMINSTER HOSPITAL.

THERE is a good deal of difference of opinion regarding the question whether the prognosis of the incoördination in tabes dorsalis is influenced by the presence or absence of optic atrophy. Thus, while many writers maintain that with the development of eye symptoms the ataxia often remains stationary, Dr. D. Ferrier in the recent Lumleian lectures expressed the opinion that all that could justifiably be said was that the ataxic and amaurotic forms of tabes are often more or less distinct though not exclusive of each other. Not so much attention has been given to the point as to whether the sensory disturbances are affected by the presence or absence of eye changes. In his lectures Dr. Ferrier pointed out that there is no constant relation between the degree of ataxia and the extent to which cutaneous sensibility is affected. The following case of tabes dorsalis is remarkable, inasmuch as marked sensory disturbances completely disappeared, apparently coincidently with the development of complete optic atrophy.

A man, 34 years of age, by occupation a warehouseman, who had formerly been a soldier, was admitted to the Westminster Hospital under the care of Dr. R. G. Hebb on August 1st, 1905, complaining of weakness and numbness of the legs. There was nothing of note in the family history. The following personal history was obtained from the patient. At the age of 24 years, while in Burma, he had dysentery and malaria; during the same year he contracted syphilis, which was treated for a period of three weeks; there were very few, if any, secondary manifestations. Between two and three years before admission the patient noticed that his sight was failing and this failure of vision gradually increased. About a year ago he found that his gait was becoming unsteady and that he swayed on closing his eyes during the act of washing his face. Soon after this he began to feel numb in the feet, and later successively in the back of the legs, thighs, lower part of the scrotum and fingers. For some months there had been dribbling away of urine on laughing or coughing, and during the last month there had been an aching pain in the lower part of the cervical region after much movement of the head. He had never suffered from lightning pains or from any crises.

On admission the patient was found to be a well-developed man, with a scar, the result of a bullet wound in 1900, in the lower part of the left calf. There was paræsthesia of the feet and tips of the fingers. There was almost complete loss of sensibility to touch, heat and cold, and pain in both legs up to the level of the knees; above that level there was partial anæsthesia up to, and including, the neck and posterior part of the head. Romberg's sign was very evident, the patient almost falling when the feet were put together, even with the eyes open; the gait was typical and very ataxic; there was slight incoördination of the upper extremities. The knee, triceps, and supinator jerks were all absent; the plantar reflex was abolished. There was some loss of control of the bladder sphincter but not of the rectal sphincter. There was slight diminution of visual acuity; the colour sense was normal; the external ocular movements were normal; the pupils were equal, moderately dilated, and reacted both to light and to accommodation. Nothing abnormal was found on examination of the heart, the lungs, or the urine.

Iodide of potassium was ordered internally and a drachm of blue ointment was rubbed into the abdominal wall each evening. Frenkel's exercises were regularly carried out. On August 21st the anæsthesia was found to have somewhat altered, the patient could slightly feel pain over the inner aspects of the knees, and easily recognised touch and pain over both groins; apart from this there was almost complete loss of sensibility as high as the neck and the right half of the face was also less sensitive than normal.

The patient left the hospital on August 25th, his condition having moderately improved. He remained about the same until Christmas, when a steady loss of the power of vision commenced, so that by the middle of April he was totally unable to read, as he said the letters were obscured by lines which crossed one another "like the meshes of a net." He also said that the unsteadiness of gait had steadily increased; the difficulty in regard to his vesical sphincter had, on the other hand, continuously improved, so that there was no longer any trouble with his micturition.

The patient was readmitted on April 30th, 1906. The sensory functions were now found to be absolutely normal; there were no paræsthesia and no impairment of sensibility to touch, heat and cold, or pain; the rate of conduction was normal and there were no pains in any part of the body. Romberg's sign was present; the ataxia of the lower limbs was so great that the patient could scarcely walk without support; he was able to perform fine movements with the upper limbs perfectly well. The plantar reflex and the knee and triceps jerks were all absent. The vesical and rectal sphincters acted normally. With both eyes open the patient was able to distinguish two fingers at a distance of four inches from the eyes; both pupils were of good size, the right being perhaps a little larger than the left; neither was absolutely circular; both reacted to light and accommodation; complete optic atrophy was present. A lumbar puncture was performed and examination of the cerebro-spinal fluid showed an extreme leucocytosis, most being small monomorphs (lymphocytes); of large monomorphs a considerable number also; and the presence of a few polymorphs, no doubt due to admixture with blood. Oxazon crystals of the thistle-down type were present; the fluid reduced Fehling's solution. The patient was put on the same treatment as before and was discharged on May 24th slightly improved.

It will be observed that the first symptom noticed by the patient was failure of sight. I regret that his discs were not examined when he came under observation on the first occasion, but it is probable that at that time his power of vision was not severely affected, so that optic atrophy, if present, was in all probability slight. Be that as it may, it is evident that in the space of eight months, coincidently with the development of practically complete optic atrophy, the sensory defects not only became arrested but actually disappeared, whilst along with the return of the sensory and bladder functions to the normal there was no improvement but rather a steady deterioration in the coördinating functions. Although Argyll-Robertson phenomenon was not present during the times the patient was under observation, there can be no doubt regarding the diagnosis as the other symptoms were so characteristic.

I am indebted to Dr. Hebb for being allowed to publish this case.

Wimpole-street, W.

A Mirror OF HOSPITAL PRACTICE BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

LEWISHAM INFIRMARY.

A CASE OF TETANUS WITH SUDDEN ONSET OF ACUTE SYMPTOMS.

(Under the care of Dr. J. HOBART NIXON.)

A WELL-NOURISHED male child, aged four years, was taken to the infirmary at 8.10 A.M. on July 3rd last suffering from "convulsions." The child was in the position known

as opisthotonos. He was bathed in profuse perspiration and the jaws were tightly clenched. His temperature was 99° F. and the pulse at the radial artery could not be felt. Morphine was administered hypodermically and there were a few short intervals in the spasms and the child died at 9.35 A.M. the same day.

The history, obtained from the mother, was as follows. On the evening of June 27th the child whilst playing ran a splinter of wood into his leg. The father withdrew the splinter and bathed the leg with a solution of boric acid. Three days later, as the wound did not heal, medical advice was obtained though the child did not complain of any pain but played about apparently in his usual health. Fomentations were applied and the wound healed. During the afternoon of July 2nd the child complained of "feeling funny in his stomach" but the uneasiness was not sufficient to interfere with his games. The discomfort was more marked in the evening but the child ate several biscuits and sweets before going to bed about 8 P.M. The mother visited the child about midnight when he complained of acute pain in the stomach and in the back of his neck. Soon afterwards convulsions set in and the medical attendant was sent for about 5 A.M. on July 3rd and ordered his removal to the infirmary.

Necropsy.—The post-mortem examination revealed the following conditions. On the outer side of the right leg, situated half-way between the ankle and the knee, was a dry, healed wound, roughly circular in shape and somewhat less than a quarter of an inch in diameter. The presence of any foreign body under the wound could not be felt. But on dissection a narrow track, one and a quarter inches in length, was revealed, at the bottom of which was found a splinter of rough, dirty wood three-quarters of an inch in length. Surrounding the splinter was a small cavity containing pus in which microscopic examination revealed the presence of typical bacilli tetani. Running through the wall of the cavity was a swollen nerve. The stomach was empty and showed no signs of irritation. The meninges and lungs were congested. All other organs were normal.

Remarks by Dr. NIXON.—The points of particular interest about the case are: 1. The superficial healing of the wound, rendering it impossible to tell by palpation that a foreign body was inclosed, though probing would have assisted the diagnosis had the child been taken to a medical man in the first instance. 2. The onset of symptoms was so sudden as to suggest poisoning; the child was playing as usual the previous evening, ate his supper, but died at 9 35 A.M. on the next morning. 3. The position of the nerve to the nidus of infection offered a ready means of transit of the toxin from the lesion of the splinter to the central nervous system.

MELBOURNE HOSPITAL.

A CASE OF A BULLET LODGED IN THE RIGHT HEART; LIFE CONTINUED FOR SIX MONTHS.

(Under the care of Dr. C. S. RYAN and Dr. H. C. MAUDSLEY.)

For the notes of the case we are indebted to Dr. Arthur Morris, late resident medical officer to the hospital.

A man, aged 70 years, and well preserved for his years' was admitted to a surgical ward of the Melbourne Hospital on Jan. 19th, 1904. He had been suffering from tabes dorsalis for the previous 16 years and had, apparently on account of the pains, attempted suicide on Jan. 18th by shooting himself in the lower part of the thorax with a revolver. Examination showed a bullet wound, with edges inverted and the skin blackened around it, situated at the level of the junction of the xiphisternum and the body of the sternum. There was very little hæmorrhage from the wound. The abdomen was lax, was not tender in any part, and there had been no vomiting. The patient complained of some pain between the shoulders posteriorly and also beneath the left nipple, while there was tenderness about the site of the wound. The direction taken by the bullet was apparently downwards, backwards, and to the left. On examination with the x rays, using the screen, the bullet was seen to be situated about two inches to the left of the sternum and opposite the sixth left costal cartilage. The patient had no symptoms which called for operative interference and was discharged on Feb. 2nd none the worse, apparently, for his experience.

Nothing further was seen of the patient until Sept. 17th, 1904, when he was admitted to a medical ward in the hospital in an unconscious condition. The history then obtainable was that he had suddenly become unconscious that morning and that the seizure had not been accompanied by any form of convulsion. On examination no reflexes, except the conjunctival, were obtainable. The heart's apex beat was in the sixth interspace, one inch outside the nipple line. The heart sounds were very weak but clear. No bruit could be detected. The second sound at the base was accentuated. The pulse was very small and rapid, with a tendency to be irregular. At this time the previous history was not known and the case was regarded as one of sudden senile heart failure. Appropriate treatment was adopted, but although the patient regained consciousness he died suddenly with marked dyspnœa and cyanosis about four hours after his admission to the hospital.

Necropsy.—There was an old skin scar situated over the lower end of the sternum on a level with the fifth left costal cartilage and corresponding to this on the inner surface of the sternum was a patch of old organised hæmorrhage. The visceral and parietal layers of the pericardium were adherent to each other nearly all over. These adhesions were not very tough, one near the apex being firmer than the rest, while those over the right heart were dark and pigmented. A darkly pigmented cicatrix was present in the anterior wall of the right auricle close to the auriculo-ventricular groove and corresponding to this on the inner surface of the auricle was a small pigmented patch. The bullet must then have pierced the right anterior cusp of the tricuspid valve, leaving a small slit-like opening. On opening the right ventricle the bullet was found lodged and partly buried in the columnæ carneæ of the apex. Part of the bullet projected into the right ventricle and was covered by a thin filmy membrane. The whole of the heart muscle was flabby and the left ventricle was dilated and hypertrophied—a kidney heart in not a very advanced stage of disease. The other organs only showed signs of age, most marked in the kidneys which were tough, pliant, and had confused cortices. The brain was soft and œdematous but no gross lesion was present.

Remarks by Dr. MORRIS.—The above case appears to be of sufficient interest to warrant recording. It is much to be regretted that fuller notes of the condition ante mortem cannot be given. The patient had apparently died from a failure of the right heart, due, it may be, to degenerative muscle changes taking place about the site of the bullet. No microscopic sections were made as the specimen was desired undisturbed.

My thanks are due to those members of the honorary medical staff, under whose care the patient was, for permission to publish these notes.

Medical Societies.

EDINBURGH MEDICO-CHIRURGICAL SOCIETY.

Ruptured Gastric Ulcer in a Boy.—Operation for Perforating Gastric and Duodenal Ulcer.—Exhibition of Specimens.

A MEETING of this society was held on July 4th, Dr. J. O. AFFLECK, the President, being in the chair.

Dr. G. KEPPIE PATERSON read notes on a case of Ruptured Gastric Ulcer in a boy, aged 12 years. The patient had suffered from pain after eating, indefinite as to position and time after food; sometimes there was no pain after a meal. There was no vomiting or flatulence and the tongue was very slightly furred. The pain continued for 12 days, being only partly relieved by treatment, when after a light dinner in the evening he suddenly felt very severe pain in the abdomen. He was seen an hour afterwards when he was collapsed, with slow pulse, rigid abdomen, normal temperature, and complaining of pain in the abdomen and also in the left shoulder, especially about the left clavicle. After the application of a fomentation and gentle friction all signs of shock disappeared in half an hour; there was no loss of liver dulness. On the next morning he had signs of peritonitis with loss of liver dulness in front. He was operated on by Dr. F. M. Caird 18 hours after the rupture. A ruptured ulcer of the size of a small split pea was found on the anterior wall about two inches

from the middle of the lesser curvature. The patient afterwards passed through an attack of double pneumonia so severe that at one time all hope of recovery was abandoned, but the very free inhalation of oxygen long continued, with hypodermic injections of strychnine, seemed to be the main element in his recovery. He quite recovered after a very slow convalescence. The cause of the ulcer was obscure. He had never suffered from any gastric trouble and had not taken anything likely to cause injury to the mucous membrane, and there was only slight caries of one tooth as a possible source of oral sepsis. Dr. Paterson included in his paper an abstract of 14 cases of ruptured gastric ulcer in children whose ages ranged from 45 hours and two months up to 13 years. These were all discovered post mortem. Only one other had been discovered on operation, that of Cheyne and Wilbe,[1] in a boy, aged 13 years, who recovered.

Dr. CAIRD then gave a communication on 25 Consecutive Cases of Operation for Perforating Gastric and Duodenal Ulcer. He said that the diagnosis of perforation was generally sufficiently obvious and a history of indigestion could usually be obtained. The classic evidences of gastric ulcer, hæmatemesis and melæna, were generally lacking. The immediate symptom of perforation usually took the form of an agonising pain referred to the umbilical region, causing the patient to "double up"; vomiting generally followed; a misleading period of quiescence often succeeded, the abdominal wall became fixed, and marked tenderness was elicited in the epigastric and suprapubic regions. The anterior liver dulness soon underwent diminution and might even be entirely absent. The leucocyte count varied from 7000 to 25,000. Diagnosis was sometimes doubtful, as it had to be made from appendicitis, acute pancreatitis, rupture of intestinal ulcers, and neoplasms. Operation should be carried out at once and the apparently moribund patient might be roused by intravenous saline transfusion and the use of strychnine. Free incision in the middle line gave most ready access. A rush of escaping gas and fluid verified diagnosis and relieved the embarrassed respiration. A broad retractor introduced at the upper end raised the abdominal wall and allowed of inspection of the stomach. It might be difficult to find the perforation, either from its small size or from its being plugged with lymph or by its inaccessibility. If the lesser sac were distended with fluid then the ulcer must have been on the posterior wall of the stomach. On identification of the perforation the ulcer should be plugged with iodoform gauze and a fresh search made for other ruptures. An incision should invariably be made in the middle line above the symphysis pubis and two glass drainage-tubes placed in the pouch of Douglas. Through one of these the pelvis should be irrigated with warm saline solution, while the ulcer received attention. There was no necessity to excise the ulcer which should be closed with fine silk sutures. The margins might be brought together; then at some little distance from the margins a series of Lembert's sutures must be introduced and a trace of iodoform rubbed in to favour plastic repair. If much perigastritis was present a large infolding of gastric wall might be necessary and lest this might occlude the gastric outlet it was better to perform gastro-jejunostomy. The whole upper part of the abdominal cavity should be thoroughly irrigated. A Keith's tube ought to be left in the pouch of Douglas and usually the site of perforation was drained by means of a Mikulicz tampon and tube. The wound in the abdominal wall was closed and the head of the bed should be raised six inches to favour gravitation of discharge from the highly absorptive upper part of the abdomen. Perforation usually took place on the anterior surface of the stomach and mostly towards the lesser curvature and pylorus. The escape of acid contents from the stomach stimulated the entire peritoneum to secrete an alkaline liquid so as to neutralise the gastric secretion. Recovery was usually uneventful and it was seldom that the stomach contained any very virulent micro organisms. Cultures were made in 11 cases: in seven micro-organisms were present; the colon bacillus was frequently present; and in four the results were negative. In considering prognosis, the size and position of the perforation, the date and nature of the last meal, and the amount of escaped material had to be remembered. It was true generally that the longer the period which had elapsed since perforation the graver was the outlook. The age of the patient and the rate and condition of the pulse afforded valuable information as regarded prognosis. A pulse of 120 was to be feared and if 130 it was to be dreaded. The after-course was full of anxiety. Thirst might be allayed by rectal saline infusion administered every four hours. Morphine might be necessary. If the pulse failed in strength or fulness while the rate increased, intravenous saline transfusion was most beneficial. Vomiting if severe or accompanied by hæmatemesis was best combated by gastric lavage. Pulmonary complications ensued in some cases—e.g., pleurisy and empyema.

Mr. ALEXANDER MILES communicated Observations on Perforated Gastric and Duodenal Ulcer, based on a personal experience of 46 cases operated upon. The conclusions to be drawn from a study of these cases might be narrated thus: 1. The liability to perforation appeared to be equally prevalent in both sexes, though females suffered more frequently from gastric ulcer than did males; 20 of the above patients were males and 26 were females. 2. Speaking generally, perforation occurred at an earlier age in females than in males and as a rule the younger the patient the better the prognosis was likely to be. 3. Although perforation occasionally occurred in patients who had not previously complained of any digestive disorder there was in the great majority of cases a history of severe antecedent indigestion and in a considerable number ulceration of the stomach or duodenum had been diagnosed. Hæmatemesis was, however, a rare antecedent symptom. 4. In a considerable proportion of the above cases premonitory symptoms of perforation had been present. 5. The actual rupture of the ulcer could not be accounted for by any constant factor. 6. The gastric perforation was situated on the anterior wall in 33 cases and on the posterior wall in three cases only; of these four were at the cardiac end, 14 in the body, and 18 towards the pyloric end. Almost all were situated towards the lesser curvature. The duodenal perforations all occurred in the first part and on the anterior wall. 7. Only in one case was there more than a single perforation. 8. Each perforation varied in size from that of a pin's head to that of a threepenny-piece. It partook of the character of a longitudinal tear in two cases. The size of the perforation bore no relation to the acuteness of onset or severity of symptoms. 9. The suddenness of onset, the overpowering nature of the pain, the marked rigidity of the abdomen, and the severity of the shock all formed the most characteristic clinical symptoms. 10. Emesis was not a common symptom at the commencement and when it occurred it did not increase the gravity of the prognosis. 11. Percussion of the abdomen gave inconstant and untrustworthy information. The disappearance of liver dulness was of no value in diagnosis nor did its persistence negative a diagnosis of perforation. 12. The site of maximum pain and tenderness was a trustworthy guide to the site of perforation and therefore to the line of incision. 13. The apparent improvement which often followed the initial shock was very deceptive and often led to dangerous or even fatal delay in operation. 14. Opium was a dangerous drug to give for the relief of early symptoms. Of 22 cases in which opium was not given 17 recovered and only five died. In 12 cases where opium was given 10 died and only two recovered. 15. Food particles were seldom recognised in the fluid which had escaped into the peritoneal cavity. The size of the perforation or the amount or quality of fluid which escaped from the perforation bore no relationship to the severity of the peritonitis. 16. At the earliest moment the abdomen should be opened by a vertical incision, placed over the site of maximum tenderness. 17. It was seldom advisable to open the stomach to find the perforation. 18. A graft from the omentum should be fixed over the line of sutures used to close the perforation. If so leakage was extremely rare. 19. It was rarely necessary to excise the ulcer and this was not to be recommended. 20. Gastro-enterostomy was an operation seldom to be justified as a precautionary measure against pyloric stenosis or as a means to favour the healing of the ulcer. 21. Pyloroplasty was a simple and efficient alternative in some cases to gastro-enterostomy. 22. The abdomen should usually be washed out and a special opening made above the pubes for drainage. 23. Injections of saline solution were more beneficial. Fluids might be given by the mouth after the lapse of 24 hours. 24. Complications met with had been such as the following: temporary gastric fistula, pneumonia, bronchitis, acute non-suppurative parotitis, crural phlebitis, pelvic abscess, and subphrenic abscess. The chief factor in prognosis was the early period when operation had been

[1] THE LANCET, June 11th, 1904, p. 1614.

undertaken. Every hour of delay diminished the patient's chance of recovery. The following was a summary of the results: gastric ulcer, 36 cases, with 18 recoveries and 18 deaths; duodenal ulcer, 10 cases, with 5 recoveries and 5 deaths; total, 46 cases, with 23 recoveries and 23 deaths.

—	Total.	Recovery.	Fatal.	Mortality.
				Per cent.
Operated on within 12 hours after perforation	19	14	5	26·3
Operated on between 12 and 24 hours after perforation	9	5	4	44·4
Operated on between 24 and 36 hours after perforation		3	3	50·0
Operated on later than 36 hours after perforation ...	12	1	11	91·7
Total	46	23	23	50·0

Mr. C. W. CATHCART, Mr. J. M. COTTERILL, Mr. H. J. STILES, Mr. R. SCOTT SKIRVING, Dr. JAMES RITCHIE, Dr. ALEXANDER JAMES, Mr. R. A. LUNDIE, and the PRESIDENT took part in the discussion which followed.

Dr. CAIRD showed: (1) A Large Vesical Calculus and Prostate removed by operation; and (2) preparations illustrating Perforated Gastric Ulcer.

Dr. ALEXANDER BRUCE exhibited: (1) Two Brains showing large Tumours involving the pituitary body, without acromegaly; (2) one brain from a case of Chronic Chorea; (3) one brain with Thickened Vertebral Arteries involving both spinal accessories; (4) a case of Mitral Stenosis with large spherical vegetation almost occluding the mitral orifice; (5) a Heart with Ulcerative Endocarditis, showing large vegetation on the ventricular side of the mitral valve (aortic cusp); (6) microscopic sections showing Bacilli from Cerebro-spinal Fluid and Blood during life and from the vegetation; and (7) photographs of Partial Ophthalmoplegia Externa.

Dr. H. M. CHURCH: Demonstration of Gärtner's Tonometer.

EDINBURGH OBSTETRICAL SOCIETY AND THE GLASGOW OBSTETRICAL AND GYNÆCOLOGICAL SOCIETY.

The special annual conjoint meeting of these societies took place on July 11th in Edinburgh, Dr. J. W. Ballantyne, the President of the former society, being in the chair.—Emeritus Professor Sir Alexander Russell Simpson (Edinburgh), Professor A. M. Makejev (Moscow), and Professor L. M. Bossi (Genoa) were elected Honorary Fellows of the Edinburgh Society.—Professor William Stephenson (Aberdeen) opened a discussion on Irregular Manifestations of Puerperal Sepsis. The bacteriologist had now, he said, thrown much light on sepsis and given the facts their due proportion and perspective, as well as advancing knowledge both as to prevention and treatment, but the relation of micro-organisms to the manifestations of morbidity was far from being specifically determined. There were many varieties of organisms, each, no doubt, had a special action, but they could not yet clinically differentiate one from another; the manifestations were similar in all and mixed infection was common. The knowledge of the site and character of the local affection was of great prognostic value. The uniform standard of morbidity, as suggested by the committee of the British Medical Association, was disappointing, as eight days were too short for irregular manifestations of sepsis to show themselves, and to record "all cases in which the temperature reaches 100° F. on any two of the bi-daily readings" would be to include some patients who did not suffer from sepsis; the condition of the breasts alone would occasionally supply such cases. In forming an opinion of a puerperal illness the whole clinical bearings must be taken into account. Any degree of temperature determined upon could not be by itself a standard of morbidity, it was merely a standard of febrility. The temperature of 98·4° was the mean of certain variations; any variations below or which only touched this line were what he (Professor Stephenson) called on the low level and above normal were on the high level. A temperature touching 100° and barely, if ever, touching normal he would consider if continued an indication in most cases of sepsis. But the pulse must be taken into account as well as the temperature and the ratio of pulse and temperature was an important prognostic aid. The condition of a patient was indicated on a clinical chart more by the horizontal character than by the vertical range of the temperature. A high temperature was not dangerous unless continued or accompanied by an undue quickening of the pulse in proportion to the temperature.—Professor Murdoch Cameron (Glasgow) showed the chart of a case where the temperature rose on the fifth day after confinement to 104·8° and ranged high; he saw the case in consultation and injected antisteptococcic serum with marked results, the temperature falling to normal very rapidly. This was repeated on different occasions till it became normal. There was a distinct history of perimetritis. Phlegmasia dolens occurred in both legs, also phlebitis of other veins extending to the arms. The patient was in a dangerous condition but one good point was that she had all through a good digestion. She was now doing well. He distinguished three classes of cases. 1. The sapræmic with foul-smelling lochia, where when the portion of placenta was removed the patient was usually immediately cured. 2. Where the cases were due to absorption of sepsis from the perineum; these usually did well in about three weeks, every day, the condition gradually improving. He considered it of importance to get the kidneys to act freely. 3. Where nothing could be found on examination, the patient had an earthy colour, tremor of voice, furred tongue occasional vomiting alternating with attacks of diarrhœa, with suppression of lochia. These cases were to be dreaded as the signs indicated general sepsis and the patients generally died in the second week.—Dr. A. H. Freeland Barbour (Edinburgh) referred to the possibility of making too much of septicæmia or rather in confusing septicæmia with toxæmia. Many febrile conditions were toxæmic due to other causes than septicæmia. Puerperal rashes were very disquieting as suspicious of a septic condition. He instanced a recent case where a scarlatiniform rash appeared the day after labour with no congestion of the fauces; the temperature was about 99·2° and the pulse was 88. It was found that the patient was liable to a similar rash after cycling or a chill. It was a question whether the muscular activity of labour, which produced a large amount of waste products, might not be the source of a toxæmia. Eclampsia was associated with a raised temperature and yet it was not septic. He instanced another case where there was a rash like measles and noted that in these cases the rash did not come on immediately after the production of the cause but that the toxæmia took time to develop.—Dr. Samuel Sloan (Glasgow) had seen in grave cases the temperature curve with the vertical line frequently coming down to normal. He considered a horizontal line of temperature a little above normal, even just above 99°, if continued as very suspicious of sepsis. He did not put value upon the temperature taken in the axilla, the mouth or rectal temperature being more accurate. He considered the state of the breasts of importance; if the breasts were acting well he had little anxiety about a case even if there were a fairly high temperature and quick pulse.—Dr. S. MacVie (Chirnside) said that in the country it was impossible to obtain regular records of temperature. Some cases with high temperature were not due to sepsis. He had seen a temperature of 103° brought down to normal in 12 hours with a good purge. He believed that the change of diet usually prescribed after labour might make patients more liable to sepsis. He now changed their diet less both before and after labour, allowing them to take more of their ordinary food.—Dr. Charles C. Easterbrook (Ayr District Asylum) said that puerperal mania or insanity was one of the most distressing complications of labour. It was stated that it was less frequent but he did not know of any statistics to prove this. There were two distinct groups: First, that of septic puerperal mania, mostly occurring within a week of labour, with high temperature and pulse and very marked delirium. This required the usual lines of treatment, curetting of the uterus if necessary, &c. He had not found serum injections successful as a rule. These cases were distinctly in the minority in asylums. Secondly, there were those which occurred later in the puerperium where the temperature and pulse showed no distinct evidence of sepsis or where the temperature might be normal. These were just like ordinary cases of insanity and had been produced by exhaustion of the nervous system by the labour, which might be called a natural physiological crisis. There might be a toxæmia due to the absorption of the material, probably an albumose, produced by the

involution of the uterus. Toxic rashes were frequently seen in the chronic insane and were mostly due to constipation. In febrile conditions the general level of the temperature was very important; in the chronic insane the temperature had to be considered in relation to their normal, which was usually 97·4°.—Dr. Claude B. Ker (Edinburgh Fever Hospital) stated that severe forms of sepsis from whatever cause, especially if going to be fatal, often had rashes and usually scarlatiniform. Scarlet fever was always true to its signs and true scarlet fever does not occur in sepsis. Many conditions would cause rashes. Constipation was a very great factor but strangely these did not occur during its persistence but after an enema or salts for its relief. He had noticed this in the typhoid cases where routine irrigations of the bowel are carried out and with all sorts of curious rashes as a result. He considered it due to the walls of the colon being cleared and the contents being well diluted and absorption thus promoted. A surgical operation might be the cause of a scarlet rash and a very small wound of the perineum might be a source. The general level was the main condition in estimating the value of a temperature. He did not feel secure from a relapse in a case until there was a level subnormal temperature. The cases of puerperal sepsis sent to the fever hospital usually had no symptoms but the temperature and were mostly fatal.—Professor Dickinson (New York) did not consider that they got much practical assistance from the bacteriologist—enough to throw out the rarer and more dubious forms of sepsis. But he was disappointed that there was so much sepsis in practice. As teachers they must impress upon their students the fact that obstetrics was not medicine but surgery and that it must be attended with everything surgically clean. There were fashions in the treatment of these cases; the injection of serum was thought at one time to work wonders and the results showed that the fatality was 40 per cent., but the fatality of those treated without serum was also about 40 per cent. Then the leucocyte count had also given out in its value. The polynuclear cells if above 80 might yet give valuable indications of the state of sepsis. They had reduced the death-rate in New York by organising an outdoor midwifery department attended by students who must keep accurate records of their cases. The great points in prevention were clean hands and a clean vulva. He instanced a case where there was a persistent moderate rise of temperature and where every ten days there was a very severe uterine hæmorrhage, almost causing death; after the third hæmorrhage the uterus was removed and was found to contain a small infecting ulcer close to one of the uterine arteries. He believed that a great many of these septic cases were due to phlebitis. At one time it was common with them to open the cul-de-sac in all septic cases and in from 30 to 40 per cent. serum or pus was found and then they put in a drain. Now that treatment had fallen into disuse and instead they incised the broad ligaments and often found and cleared out small phlebitic clots.—Dr. E. H. L. Oliphant (President of the Glasgow Society) thought that many cases of high temperature arose from toxæmia and not from sepsis. In the Glasgow Maternity Hospital he had found the temperature rise to a very high degree due to emotional causes; in these cases it rose suddenly, did not maintain a high level, and fell as suddenly. They had experienced a slight scarlet fever epidemic in the Maternity Hospital, but the rash and signs were quite typical in these patients. He instanced a patient who had a rigor on the fourth day accompanied with pain below the ribs on the right side. He took a swab of the contents of the uterus and found a pure culture of pneumococci. Two days later the patient showed signs of pneumonia.—Dr. J. C. G. MacNab (Dysart) said that germs flourished in patients of lowered vitality and that the general condition of the constitution was of great importance. The determining cause of rashes was difficult to find: he had two operations—one a herniotomy where no antiseptic lotion was used, only sterilised water; and another, a case of operation for septic mastoiditis, and yet both had similar scarlatinal rashes.—Professor R. Jardine (Glasgow) had seen a great many cases of puerperal rashes and also rashes after operations. Sometimes it was very difficult to distinguish them from true fever when they were accompanied with rise of temperature. He considered the aspect of the throat the main point in the differential diagnosis. As causes of rise of temperature other than sepsis, he mentioned excitement, as he had often seen it occurring in patients on the night before leaving the Maternity Hospital, due to their finding out some disturbing element at home. He had met a number of cases of rise of temperature due to the condition of the bowels. At one time he watched carefully day by day the progress of the involution of the uterus. He found some cases where there was very rapid decrease of the uterus, even in 24 hours falling below the pelvis, and in all these cases there was a rise of temperature, even up to 105° F., due to the absorption from this source. He had seen irregular manifestations due in several cases to abscesses, such as of the kidney and between the diaphragm and stomach, from a ruptured ulcer.—Dr. J. W. Ballantyne alluded to the conference in London on puerperal morbidity. They had suggested a uniform system of nomenclature, and for morbidity agreed to exclude the first day and any manifestation beginning after the eighth day, and provisionally that three bi-daily readings above 100° F. with a pulse above 100 indicated puerperal morbidity. At the Edinburgh Royal Maternity and Simpson Memorial Hospital out of 100 cases four fulfilled these conditions and these all recovered but others with rise of temperature died. He instanced a case of puerperal insanity in which the patient had to be removed to the asylum and died six weeks after labour, when post mortem a small abscess of the uterus was found.—Professor Stephenson replied.

BRITISH GYNÆCOLOGICAL SOCIETY.—A meeting of this society was held on July 12th, Mr. F. B. Jessett, the President, being in the chair.—Dr. S. Jervois Aarons showed a Modified Hollow Ring Pessary filled with a mixture of gelatine and glycerine used in retroflexion with prolapsed ovaries.—Dr. R. C. B. Maunsell showed the following specimens: 1. Uterus and Adnexa removed by Wertheim's operation for malignant disease of the cervix. The glands were removed up to the kidneys and although enlarged yet no evidence of malignant disease was found. The ureters were easily found by tilting forward the ovaries when they readily showed through the peritoneum. The patient had urinary leakage on the tenth day which healed up in a few weeks after the bladder was washed out regularly. 2. Specimen of Carcinoma of the Right Ovary from a single patient, aged 25 years, who complained of a swelling in the abdomen for five months. On opening the abdomen some ascitic fluid was found and there were adhesions between the tumour and surrounding structures and also between the liver and anterior wall of the abdomen. The left ovary contained a small cyst which was not malignant. The patient had increased in weight and so far there was no evidence of metastasis or recurrence. 3. Myoma of the Cervix from a patient, aged 47 years, who had metrorrhagia for two years. The tumour bled profusely when touched, so that vaginal plugging was necessary. On drawing the tumour down it was found to be attached by a narrow pedicle which was snipped through with scissors. The patient recovered satisfactorily. 4. A Tubo-ovarian Abscess of one side and Salpingitis of the other tube removed from a multipara, aged 24 years, 15 months previously. The patient continued well for some months and then complained of severe pain and vaginal discharge. The uterus was removed and was found to be in a condition of suppuration. The patient made a good recovery. 5. Two large Tubo-ovarian Abscesses of gonorrhœal origin removed from a patient, aged 23 years, who had no children and had been married about a year. She complained of vaginal discharge and pelvic pain. Before operation she had two attacks of sudden severe pain and when seen was collapsed. On opening the abdomen pus welled up from the peritoneum and both tubal abscesses were found ruptured. Two incisions were made, one above and the other below the umbilicus; the abdominal cavity was washed out and drained with gauze. The patient made an uninterrupted recovery. 6. Two Tubo-ovarian Abscesses which ruptured before operation. The same line of treatment was adopted as in the former case but the patient died a few days afterwards.—Dr. H. Macnaughton-Jones showed a specimen of Hydatidiform Mole removed from a patient, aged 20 years, who had been married 18 months and had one stillborn child at term. She considered herself to be four months pregnant but had had a hæmorrhagic discharge for some time. The uterus was emptied and the specimen showed degenerated decidual tissue and chorionic villi with hyperplasia of Langhans's layer and syncytial buds. As a precautionary measure the uterus was curetted two months afterwards.—Dr. James Oliver read a paper entitled "A Study of Hydatidiform Mole with the Records of Three Typical Cases." After mentioning the theories of menstruation and expressing himself in favour of

the view that there was no destruction of tissue, he briefly described the anatomical relationship between the allantois and chorion. The pathogenesis dated from the embryonic period between the third and sixth weeks. The interaction of allantois and chorion was at first harmonious. This interaction might be disturbed by the vigorous local growth associated with the formation of the placenta and might induce a perversion of the function of the allantois which might prejudicially influence the vessels and more or less obliterate them so that a mole might result. The functionally deranged placental and even non-placental villi might excite such reaction in the uterine wall that a more or less intimate union might be established between embryonic and maternal tissues so that the morbid process connected with this union might be injurious not only during gestation but also after abortion. Hydatidiform mole might be found at any time during reproductive life. The symptoms were then detailed. The association of amenorrhœa with the presence of a mole raised an interesting point, as in cases of intra-uterine death it could not be assumed that the suspension of menstruation could be solely due to the presence of a perished ovum in the uterus. The derangement was probably due to some disturbance in the metabolism of the uterus, for the abortive or aberrant product of conception attracted to itself and absorbed nutriment which was elaborated and practically secreted by the endometrium. The demand made thus upon the uterus was very different from that made by an ordinary neoplasm and induced such an alteration in its physico-chemical state generally that not only was menstruation held in abeyance but the irritability was so impaired that it might tolerate for an indefinite time the presence of a vesicular mole in its cavity. A uterus of a smaller size than ought to be considering the suspected duration of pregnancy was an important phenomenon. Three cases of molar pregnancy were then detailed and a discussion followed.

Reviews and Notices of Books.

Scientific Memoirs by Officers of the Medical and Sanitary Departments of the Government of India: Mediterranean Fever in India; Isolation of the Micrococcus Melitensis. By Captain GEORGE LAMB, I.M.S., and Assistant Surgeon M. KESARA PAI, M.B., C.M. Calcutta: Office of the Superintendent of Government Printing. 1906. No. 22, New Series. Price 10 annas, or 1*s.*

SOME doubt has recently been cast on the belief that the fever with which the name "Malta" is associated has a wide geographical distribution. Whatever may be the truth of this doubt as regards the appearance of this disease in many parts of Italy, Greece, Turkey, Palestine, Africa, Southern China, Fiji, and localities in the Western Hemisphere, there can, we think, be no hesitation in asserting that it occurs in India. Of the truth of this the facts related in the above memoir afford ample proof. Thus Wright and Smith have tabulated ten cases invalided from India. Birt and Lamb, again, observed ten other examples at the Royal Victoria Hospital, Netley, in patients who had been invalided for enteric fever, malaria, and rheumatism. In 1900 one of the authors of the memoir, working in Bombay, studied five cases contracted in that city; four cases a short time afterwards were diagnosed in Simla both by the clear clinical symptoms and in two of the cases by the sera giving positive reaction with the micrococcus Melitensis. In 1901 Greig reported three cases in the Swat Valley. The authors hold that the serum agglutination method for the diagnosis of Mediterranean fever when properly and rigidly controlled is a most delicate bacteriological test and that it ought to take its place as an important addition to the ordinary clinical methods for the diagnosis of the disease. This opinion is evidently shared by the Commission that was appointed for the investigation of Mediterranean fever under the supervision of an advisory committee of the Royal Society. The work of the two authors of the report under review amply confirms this view.

The diagnosis of the fever was arrived at by reason of the sedimentation test and in a considerable number of the cases it was proved to be correct by the isolation from the spleen during life of a coccus bacteriologically indistinguishable from the micrococcus Melitensis. The technique employed by the authors and the precautions taken to control their observations are detailed and were briefly as follows. All agglutination experiments were made macroscopically in the capillary tube of Wright, by means of which also the serum dilutions were effected. Equal quantities of the various dilutions of the serum made with normal salt solution and of a sterile emulsion of the micrococcus were employed in all instances. The preparations were allowed to stand at laboratory temperature (about 18° C.) for 24 hours when the results were recorded. The emulsions were all made in exactly the same way—namely, a uniform growth on agar of from four to seven days was emulsified with normal sterile salt solution, about 2·5 cubic centimetres of the latter being used for each agar culture; the bacteria were then killed by heating at 60° C. for 15 minutes and finally 0·5 per cent. carbolic acid was added. At the same time control experiments with the blood of healthy individuals and of patients suffering from other diseases were made almost daily—viz., with the bloods of 51 healthy individuals, all natives of India, and with all bloods sent to the Pasteur Institute of India for serum diagnosis of typhoid fever, about 150 cases. Thus the two series of controls amounted to over 200 in number and show that the bacteriological test is a delicate, easy, and absolutely trustworthy method of diagnosis.

The cases of Mediterranean fever coming under the notice of the authors fell into two groups—viz., (*a*) those in which the micrococcus Melitensis was isolated from the spleen during life and (*b*) those in which the diagnosis rested solely on the clinical history and the serum agglutination reaction. The bulk of the memoir is taken up with a recital of the cases which go to prove the fact that Malta fever does occur in India. It concludes with a highly interesting account of the disease as occurring in the 15th Sikhs at Ferozepore, who were evidently infected from a pre-existing source in the same station. The whole report demonstrates that Malta fever is not peculiar to Malta and it will well repay a perusal.

Infant Mortality: a Social Problem. By GEORGE NEWMAN, M.D. Edin., D.P.H Cantab., F.R.S. Edin. London: Methuen and Co. 1906 Pp. 356. Price 7*s.* 6*d.*

IF proof were required of the truth of the familiar saying that "the people perish for lack of knowledge" this would be supplied by a study of the present work on Infant Mortality, for an advance copy of which we are indebted to Dr. George Newman, the medical officer of health of the metropolitan borough of Finsbury. Very opportune is the appearance of this volume at the present juncture, when the public conscience has at length been aroused by recent revelations concerning the terrible sacrifice of infant life which continues year after year in this country. And its publication a few days before the opening by the London County Council of the National Conference on Infant Mortality was doubtless turned to good account by the President of the Local Government Board who, in his interesting inaugural address at the Caxton Hall,[1] spoke in highly appreciative terms of Dr. Newman's work. In the interval which has elapsed since receiving it we have taken the opportunity to peruse carefully the book and we may say at once that it bears evidence of careful and thorough composition by one who is eminently qualified for the task. As far as we know this is the only modern text-book of any pretensions to scientific accuracy that is available to the

[1] A notice of this conference appeared in THE LANCET of June 16th, p. 1710.

English reader, and we predict for it a wide circulation, not by any means limited to students or practitioners of medicine.

The term "infant mortality" is used by the author, as, indeed, by most of his contemporaries, to express the ratio of deaths under one year of age to registered births. And so long as stillbirths continue unregistrable in England this method is at least as trustworthy as any other at present available.

Dr. Newman emphasises the Registrar-General's announcement that almost exactly one-quarter of the total deaths occurring every year are those of infants who have not attained the first anniversary of their birth. The national registers record nearly 1,000,000 births and more than half that number of deaths annually, and out of those 500,000 deaths at least 120,000 are dead infants—"a vast army of small human beings that lived but a handful of days." But this is not all, for proportionally to population there were last year four births fewer in every 1000 persons living than there had been in the same number of persons in 1851. If the birth-rate were to-day the same as it was in the middle of last century there would be every year more than 60,000 additional infants born. Whilst commenting with satisfaction on the recent substantial decline in the English death-rate *at all ages* Dr. Newman rightly insists on the importance of discriminating the ages at which this improvement has taken place. "In England and Wales," he says, "there has been no change in the infant death-rate, the deaths of infants still continue at the old high rate—one in six dying before it is twelve months of age." Nor is England alone in this respect. In other civilised nations also, with few exceptions, the birth-rate is declining and the same is true of the general death-rate. But infant mortality, as a rule, is stationary or even increasing. The Registrar-General is quoted as responsible for the statement that in the Australasian Commonwealth, as well as in New Zealand, Ireland, Norway, Sweden, the Netherlands, Switzerland, and Denmark, it shows signs of decreasing, the death-rate of infants falling to a comparatively low figure in several of the countries last mentioned. But the foregoing are exceptions. In foreign countries, as a rule, infant mortality is higher than in Great Britain and in some of them —e.g., Austria and Chili—it reaches extremely high figures. But the author goes further in his analysis of infant mortality and shows that the chief incidence of death among infants is upon the earliest months of life. Of the deaths under one year in this country nearly half take place within the first three months, against 21 per cent. in the second three months and 30 per cent. in the last six months of the first year. Going still further, we note that in the first month of life a higher proportion of infants die than in any other month of the first year. Dr. Farr has shown that a like excess of incidence was noticeable in 1864. Thus, 57 per cent. of the total infant deaths occurred in the first month, after which the rate decreased almost steadily until the twelfth month, when it was less than 10 per cent. of the whole.

As regards the topographical distribution of infant mortality, we learn that it is highest in the Northern and North-Midland districts and lowest in the area south of a line drawn from the Wash to the mouth of the Severn. On reference to the map of England it appears that the imaginary line which divides the high mortality districts from the low is also the line which divides the agricultural from the industrial, particularly the mining and textile, portion of the community. Some counties are characterised by a uniformly high, and others by a uniformly low, infant mortality. Among the former are Northumberland, Durham, York, Lancaster, Chester, Stafford, Nottingham, Leicester, and Warwick. Among the latter are Westmorland, Wiltshire, and Dorset. This state of things is not peculiar to any one year or to any recent group of years, the counties that in 1891–1900 showed either a high or a low death-rate having been similarly circumstanced in the preceding decade. But in order to exhibit the extremes of mortality it is necessary to compare areas smaller than counties, to contrast the rates of exclusively urban areas with those of areas that are mainly rural. This Dr. Newman has done and he has shown that the rate in certain industrial English towns is more than double the rate prevailing in definitely rural districts. Whatever may be the effect of density as such on the health of the people, it is certain that the excessive fatality prevailing in many urban districts is, as Dr. Newman expresses it, "an effect of the towns," the older and denser parts of each great town being the most destructive to infant life and the outer zone the least destructive. The distribution of infant mortality in Great Britain follows mainly in the wake of "urbanisation" combined with the industrial and social conditions accompanying it. In its most acute form it becomes a problem of town life. Rural life as found in agricultural counties appears to be favourable to infancy, probably owing to concomitant social conditions and domestic habits. The diseases that are most destructive to infant life are: (1) immaturity, which causes 30 per cent. of the total deaths at this age; (2) lung diseases, 17 per cent.; and (3) diarrhœal diseases, 14 per cent. Atrophy and congenital defects are grouped together with premature birth to form the first of these classes, as having an ante-natal origin. These children are born in such poor physical condition that they are unfit to live and find a few hours or days of extra-uterine life too much for them. They are not so much diseased as merely unfit, and are either not ready or not equipped for separate existence. In a table copied from the Registrar-General's last report the incidence of these and other groups of disease is shown upon urban and rural districts respectively on the average of the last five years.

It is noteworthy that whilst lung diseases and diarrhœal diseases are vastly more fatal in the towns than in the country, "wasting diseases," as they are called by the Registrar-General (Group I. of Dr. Newman), are almost as destructive in the country districts as they are in the towns of England. We have not space to follow Dr. Newman in tracing to their causes the various forms of disease that afflict infant life but it may be stated generally that diarrhœal diseases are intimately related to artificial feeding of infants which nowadays seems to be supplanting breast-feeding in practically all sections of society and that most of the other post-natal causes of death must be considered in relation to the employment of the mothers, the mortality of infants being high or low according as they are left or are not left to the guardianship of "caretakers."

An extremely interesting section of the book is that which treats of the occupation of females as tending to injure young women and prospective mothers and through them their offspring. It is largely based on the evidence given by the lady inspectors of factories before the recent Committee on Physical Deterioration. Dr. Newman summarises this section of his book thus—the operations of female factory labour are three-fold: "First, there are the ordinary injuries and diseases to which women and girls in factories are liable; secondly, there is the strain and stress of long hours and hard work to the pregnant woman; and, thirdly, there is the absence from home of the mother of the infant. It cannot be doubted that these are the factors in the relation between factory occupation of women and a high infant mortality."

Dr. Newman suitably acknowledges his indebtedness for the materials of his book to Dr. Tatham and to Sir Shirley F. Murphy as well as to several other well-known sanitarians

whose writings he has drawn upon extensively. In conclusion, we cordially recommend the work to the attention of medical officers of health and of all others who are interested in this important question.

The Morphology of Normal and Pathological Blood. By GEORGE A. BUCKMASTER, D.M. Oxon. With five plates, some coloured, and 14 illustrations in the text. London: John Murray. 1906. Pp. 244. Price 10*s.* 6*d.* net.

A COMPLETE knowledge of the literature on the blood is practically beyond the reach of anyone. Although the various excellent works on this subject which exist in English have not been consulted the author appends 14 pages of references to authorities which have actually been consulted. The work consists of eight lectures delivered in the University of London. Regard has been had to the close relationship of physiology and pathology to medicine, so that in this volume the physiologist, the pathologist, and the medical practitioner will find the latest and the best that recent scientific investigation has to record on a subject which daily becomes of greater and more extensive import and significance.

The first two lectures deal with the red corpuscles generally and with many specific points connected with them, such as their specific oxygen capacity, their behaviour to stains, polychromatophilia, hæmoglobin content and its condition in the corpuscles, and the polycythæmia of high altitudes. The red corpuscle possesses no single feature that can with certainty be relied upon as evidence of its life; it shows no sign of metabolic activity and exhibits a function which is purely chemical and physical in character—that of an oxygen carrier. Indeed, our knowledge of the origin of the red disc and its duration of life is still limited; in fact, our knowledge is so limited that "we are entirely ignorant either as to the place or manner of formation of hæmoglobin." The author regards polychromatic staining as a sign of degeneration. In regard to polycythæmia the number of corpuscles may vary greatly in health and the author does not attach much importance to a simple count of red discs. It appears that both the number of corpuscles and the percentage of hæmoglobin augment during residence at high levels. Very interesting experiments are given on this subject in the second lecture.

In dealing with hæmolysis within and outside the organism the author assumes the existence in the red discs of a surface layer or envelope of varying permeability. Regeneration of red corpuscles and hæmoglobin may take place after excision of the spleen. As to the action of hæmolysins, which can be artificially produced in sera, the only test is given by their behaviour towards certain red corpuscles. It is a definite toxic substance for a specific body, the red corpuscle. They are all destroyed by a temperature at 55° C. maintained for half an hour, which distinguishes them from other toxins and certain ferments.

The fourth lecture is devoted to the white corpuscles of the blood. This lecture deals fully with the subject both historically and from a practical point of view. The leukæmic lymphocyte is probably not necessarily connected with purely lymphoid tissue. Of the abnormal cells which may be found in blood the majority appear to have migrated from the bone marrow. For the examination of fresh marrow the author strongly commends the elder-pith method introduced by Arnold of Heidelberg.

The fifth lecture deals with leucocytosis, leucopenia, and leucolysis, a chapter of special interest and most suggestively treated. The next lecture is devoted entirely to blood plates. A full account is given of Deetjen's method which enables the observer to see an enormous number of these bodies, which appear "like a miniature starry heaven" on the thin sheet of solid agar. That they disappear rapidly and show blood is incorrect. The author holds that platelets are produced both inside and outside the body by damage to the blood plasma (p. 121). Indeed, he believes that the platelets are artefacts or pathological bodies which, according to their orgin, fall into four groups: (1) those containing hæmoglobin; (2) those destitute of hæmoglobin; (3) those with an inner body; and (4) those without an inner body.

The seventh lecture is of more purely chemical and forensic interest, being concerned as it is with the guaiacum, hæmin, and biological tests for blood. It deals fully with the subject of "precipitins." The eighth lecture is a comprehensive one and is of great interest to medical men, as it discusses the morphology of pathological blood.

A most valuable appendix (pp. 181–218) dealing with selected clinical methods for investigation of the blood and fluids from serous cavities will prove most useful, as much that is obsolete in methods has been omitted while those that have proved of value are fully set forth.

We strongly recommend this work to the consideration of the physiologist, the pathologist, and the practitioner of medicine. It gives the latest and most trustworthy results, *résumé*, criticisms, and methods in regard to that fluid which we know from Mephistopheles "is juice of quite peculiar kind."

The Report of the Departmental Committee appointed by the Board of Agriculture to inquire into the Ætiology, Pathology, and Morbid Anatomy of Louping Ill and Braxy. Printed for the Government by Darling and Son, Bacon-street, E. In three Parts. 1906.

THIS report, consisting of three separate blue-books, one of which contains no less than 342 pages, is the result of an investigation carried out by a committee consisting of Professor D. Hamilton, Dr. McI. McCall, Mr. Wheler, Mr. Craig, Mr. Young, and Mr. A. Berry, all of whom are well known in the medical, veterinary, and zoological worlds. The investigation was commenced in the spring of 1902 and was carried out until the end of last year. The species of animals affected and the sources of contagion, particularly with reference to the agency of the tick and the different methods by which animals could be inoculated, are related in full detail. Maps have been made showing the distribution of the two diseases in various parts of Scotland, and an organism has been detected to which the ailment known as louping ill can be attributed. The reports are full of interesting bacteriological data and the summaries of the investigation of the two diseases are as follows.

Braxy and louping ill form two of a group of specific bacterial diseases, the primary habitat of the bacteria which are the cause being in each case the alimentary canal. The germs of this group of diseases are picked up by the animal when feeding and the fatal effect may be prevented by drenching with the culture of the respective bacilli during the period of resistance. At some seasons of the year the blood of the sheep destroys the bacteria and at such times the animal is proof against them; at other times the blood is unable to resist the invasion of the bacteria and death ensues.

A very remarkable discovery was made with regard to the question of susceptibility and immunity. It was found that if the blood of a healthy sheep was placed in a test tube, a culture of the louping ill bacilli added to it, and the mixture inoculated into the body, very opposite results were obtained at different seasons of the year. If this was done in the spring, during the louping ill season, the organism as a rule multiplied freely in the blood, whilst at other times of the year the blood destroyed the bacilli, and a period was eventually reached in July and August when this bactericidal action of the blood became complete. During certain months of the year the louping ill bacilli may apparently reside and multiply in the alimentary canal without occasioning any injury to the sheep; in fact,

the walls of the stomach and intestine form a complete barrier to their passage into the peritoneal cavity or into the tissues. This seems to be due to the blood having an influence inimical to their growth at these particular times. When the contagious period, viz., spring time, approaches, owing to the blood failing in its power to destroy the bacillus, the protective influence is lost and the organism, if now picked up by the sheep for the first time, is able to pass through the wall of the intestine with facility. Thus sheep, which when grazing pick up the organism during the season when they are not susceptible, usually allow of its passage along the intestine without detriment and are rendered immune. Few, if any, become infected a second time.

The most important result of the investigation, when considered from the view of the owner of the sheep and of the animals themselves, is that certain experiments were done to endeavour to find out a preventive treatment and the results appear certainly to have been, so far as they went, satisfactory. The drench which proved most satisfactory was prepared by incubating the specific bacteria on gelose-beef-tea, a small quantity of which, mixed with water, was administered to each sheep by the mouth, a second dose being given from a week to a fortnight later.

According to the report "the results have proved eminently satisfactory." For example, in the case of louping ill, in the first series of experiments ten sheep were treated in June, 1903, and none of them died from the disease. In the second series 175 were treated and two only died from louping ill, whilst in the third series of experiments 1340 were treated and only one died, that being considered to be a doubtful case. In regard to braxy 34 sheep were treated in the first series of experiments and none of them died from this disease, whilst in the second series 1544 were subjected to the drenching experiments and only nine (of which at least three were doubtful) succumbed. The report has added valuable knowledge to two of the least known of diseases of sheep and, as stated, distinctly demonstrates what necessity there is for a more extended and trustworthy knowledge of their nature and causes. We may conclude with a quotation from the introduction of Part I., "From a pathological point of view, they (the diseases of sheep) are a perfect mine of wealth, are fraught with scientific problems of the highest interest and importance, and are most suggestive of what may turn out to be a new light on the pathology of many of the contagious and infectious diseases of man and lower animals."

A Manual of Diseases of the Eye. By CHARLES H. MAY, M.D. New York, Chief of the Eye Clinic, Columbia University, &c., and CLAUDE A. WORTH, F.R.C.S. Eng., Ophthalmic Surgeon to the West Ham and East London Hospital, Assistant Surgeon to the Royal London Ophthalmic Hospital, Moorfields. London: Baillière, Tindall, and Cox. 1906. Pp. 400. Price 10*s.* 6*d.* net.

THE fifth edition of May's Manual of Diseases of the Eye has been prepared by Mr. Worth. It preserves the high reputation which the book has already obtained. Like most of its competitors this manual has all the characteristics of a condensed text-book. In the process of condensation the author is liable to lose sight of the special requirements of students. Whilst the author of a text-book is justified in assuming some elementary knowledge on the part of his readers it is these fundamentals which require special emphasis and expansion by the writer of a manual. We regard it as a prime function of a manual to bridge the gulf between physiology and pathology. This is especially the case in ophthalmology, where the student is confronted with optical difficulties. Yet in the manual under consideration—and it is no exception in this respect—elementary optical principles are relegated for discussion to Chapter XXI. It is extremely illogical to describe for students the normal and pathological conditions of the fundus before teaching in detail the means whereby they can verify the descriptions for themselves. Another evidence of condensation is observed in the endeavour to crowd too much into the compass of the manual. This is noticeable not only in the mere mention of rare conditions such as simply confuses the student without adding to his stock of useful knowledge, but also, and in a more reprehensible manner, in the enumeration of many methods of treatment without proper indications for their use and of their respective advantages.

Apart from the general arrangement and insufficient discussion of elementary principles to which attention has been drawn May and Worth's Manual is a favourable specimen of its class. We may, perhaps, refer to a few details which might be improved in a future edition. Some reference should be made to the treatment of wounds involving the canaliculus. Whilst angular conjunctivitis and the diplobacillus of Morax-Axenfeld are both mentioned their relationship is not stated. We have been unable to find any mention of the so-called xerosis bacillus, though it is frequently present and cannot be diagnosed morphologically from the Klebs-Löffler bacillus. The palpebral and bulbar forms of spring catarrh are only exceptionally found combined. No mention is made of the rare cases of transverse calcareous film of the cornea in eyes with good vision, though the treatment given is applicable to these cases alone. A distinction should be drawn between posterior staphyloma and the myopic crescent. The suggestion of the use of a myotic in the treatment of some cases of iritis is inadvisable in a student's manual.

The illustrations are a special feature of the book—335 figures, including 21 coloured plates. They are for the most part excellent. Figs. 33 and 34 do not represent the ordinary appearance of lamellar cataract. The arrangement of vessels in Figs. 37 and 38 is unusual and in any case these figures should be turned round. The position of the lacrymal sac in Fig. 88 is inaccurate. Fig. 111 is not a good picture of episcleritis, nor is Fig. 171 an accurate diagram of a normal iridic angle. Figs. 179 and 180 of iridectomy and Figs. 188 and 189 of cataract extraction are reproduced from very successful photographs but diagrams on a larger scale would be more instructive.

Die Blinddarmentzündung in der Armee von 1880–1900. (*Perityphlitis in the Army from 1880 to 1900.*) By Dr. STRICKER. With ten plates. Berlin: August Hirschwald. 1906. Pp. 96. Price 4 marks.

THIS small volume consists of a report on all cases of appendicitis, or, as the author terms it, perityphlitis, which have occurred in the German army during the 20 years 1880–1900 and in addition a few statistics are given in regard to cases of the succeeding years, 1900–05. The number of cases brought under survey is very large, amounting to 6390, so that on this account alone it forms a very valuable contribution to the literature of the subject in regard to mortality and other statistics. On the other hand, it must be pointed out that these cases have occurred under very varied conditions of diagnosis and treatment and therefore the statistics in regard to them cannot be accepted with the same confidence as those involved in a series of cases under one surgeon or at one of our own hospitals.

From the total number of 6390 cases Dr. Stricker deducts 94, leaving 6296 cases. After a perusal of the reports of these 94 cases he comes to the conclusion that they presented no definite signs of inflammation and that they should be classed in the category of constipation or appendicular colic. They yielded readily to aperient treatment. The treatment during these 20 years has been essentially medicinal or expectant, operation only being resorted to in cases of definite abscess formation or general peritonitis, so

that of the 6296 cases, only 235, or 3·7 per cent., were operated upon. The total mortality amounted to 270 deaths, or 4·3 per cent., but the mortality of the cases operated upon amounted to 28 per cent. The figures for the cases of appendicitis during the years 1900–05 compare very favourably with these and point to considerable improvement in the surgical treatment of the disease. Thus, the percentage of cases operated upon during this period rose to 14 per cent., with a mortality of 15·5 per cent., but it is pointed out that the mortality of the surgical cases varied for the different army corps from 0 to 34 per cent. The total mortality for all cases of appendicitis during this period 1900–05 was reduced to 3·1 per cent.

Although the author naturally regards with approval the improved surgical skill as evidenced by these figures, he is not in favour of adopting the more advanced surgical treatment in the army. He points out that whereas only 11·3 per cent. of the total number of cases were invalided out of the service, of the cases treated surgically 71 per cent. were dismissed as unfit. He admits that with more general surgical treatment this proportion would be considerably reduced but he thinks that it would still amount to at least 50 per cent., a supposition which appears hardly justified in the light of statistics from other sources.

In regard to recurrences, 276 or 4·4 per cent. of the cases had had attacks previously to their military service; 905, or 15 per cent., had recurrences during their service; and of 910 cases which he was able to follow up after leaving the service, 144, or 18·8 per cent., recurred, leaving 766, of which 92, or 12 per cent., suffered from chronic appendicular trouble and were in consequence rendered unfit for further service. More than half the recurrences took place within the first year. With such a large supply of data at his command Dr. Stricker is able to discuss with some effect the interesting question as to whether appendicitis is actually so much on the increase as is by some supposed. He has arranged a table showing in the successive periods of five years the number of cases diagnosed as appendicitis, liver complaints, stomach and intestinal diseases, and peritonitis. This table clearly shows that whereas there has been a steady and large increase in cases of appendicitis there has been a decrease in other abdominal cases in more than corresponding proportions and he is therefore led to the conclusion that the increase in cases of appendicitis is only apparent and due to a more accurate recognition and diagnosis of the disease. Many details are given in regard to the different exciting causes of the disease and the post-mortem findings, and they agree for the most part with those of other series of cases. The last chapter of the book is devoted to the question of the importance of a leucocyte count as a help to the diagnosis of suppuration and to the determination of surgical interference.

The Combined Treatment of Diseases of the Eye. By G. HERBERT BURNHAM, M.D. Tor., F.R.C.S. Edin., Professor of Ophthalmology and Otology at the University of Toronto. London: H. K. Lewis. 1906. Pp. 92. Price 3*s*.

THE "combined treatment" consists of hypodermic injections of pilocarpine, one-twelfth of a grain up to half a grain, together with the internal administration of mercury and iodide of potassium. The injections are given daily for from ten to 21 days. After an interval of from two to four weeks another series of from seven to ten injections is given. This series is then adhered to and kept up with intervals varying from four to eight weeks. The treatment can be continued for an indefinite time. As might be expected, the best results are obtained in syphilitic disease, but considerable improvement has been noticed in cases of iritis, iridocyclitis, and sympathetic ophthalmia. In many of the cases recorded insufficient details of the clinical history are given, and the reader is dependent entirely upon the author's bare statement of diagnosis. A regrettable tendency to regard the treatment as a panacea for all intractable diseases of the eye is noticeable, benefit being alleged in such cases as disease following masturbation, conical cornea, paralysis of the third nerve, hypopyon ulcer, "hyalitis," retro-ocular neuritis, albuminuric retinitis, and so on. We consider that the author is scarcely justified in appropriating this method of treatment in the manner he has done. It is a recognised mode of treatment in properly selected cases and the results which he has obtained are not so revolutionary as to merit a special monograph. The virtues of precision and perseverance in treatment are rightly emphasised, but though they bear repetition they are amongst the axioms of the conscientious practitioner.

LIBRARY TABLE.

Archives of the Middlesex Hospital. Vol. V. Fourth Report from the Cancer Research Laboratories. Edited by W. S. LAZARUS-BARLOW, M.D. Cantab., F.R.C.P. Lond. London: Macmillan and Co. 1905. Pp. 277.—This report from the Cancer Research Department of the Middlesex Hospital contains the records of much useful work, chiefly statistical and histological. The first part consists of a tabulated synopsis of the post-mortem examinations and operations on cases of malignant disease in the hospital during the year 1904, with details of the secondary deposits and the microscopical nature of the growth in all cases. There are also statistical studies of "cancer ages" and the site-incidence of carcinoma to which reference has already been made in a leading article.[1] Mr. W. T. Hillier contributes a note on three experimental inoculations of animals with considerable amounts of epithelium, but in each case the inoculated material was treated as a foreign body and no epithelial growth resulted. A histological study of considerable interest by Dr. G. T. Wrench deals with the relation of elastic tissue to carcinoma. He finds that the small-meshed intra-alveolar stroma of carcinoma, whether primary or secondary, is devoid of newly formed elastic tissue except in the neighbourhood of vessels or ducts. In the special instance of primary carcinoma of the liver he finds at least two varieties of stroma—a small-meshed form free from elastic tissue and a large-meshed variety containing abundant elastic tissue and indicating a pre-existing cirrhosis. These observations therefore throw some light on the cases of so-called cancer with cirrhosis. Dr. P. Campiche and Dr. W. S. Lazarus-Barlow contribute a paper on 1976 cases of malignant disease of the breast, which constitutes a most exhaustive study of the clinical and pathological features of the disease both in females and males. An interesting paper of similar character on malignant disease of the liver and bile passages by Dr. H. A. Colwell comprises statistics of 41 cases of primary carcinoma of the liver, 31 of the gall-bladder and bile passages, and 608 of secondary deposits in the liver observed in 12,500 necropsies, of which about 3300 were cases of malignant disease. Some information of very considerable interest is afforded, especially in regard to the frequency of gall-stones in cancer of the gall-bladder and bile passages, notably the rarity of biliary colic in that condition and the later age at which these cases occur in women than in men. The same observer contributes a short paper on the relation of carcinoma to gall-stones in which he states that the occurrence of gall-stones in cases of carcinoma in the two sexes is approximately proportional to the liability of males and females to cancer; that gall-stones are met with in both sexes approximately two and a half times as frequently in carcinomatous as in non-carcinomatous cases; and that the

[1] THE LANCET, March 10th, 1906, p. 684.

liability of gall-stones to be associated with carcinoma is independent of the seat of the primary growth. A monograph on Malignant Disease of the Prostate is contributed by Mr. J. W. Thomson Walker, based on a very minute study of 16 cases, a larger number than has been previously recorded. This paper constitutes a valuable addition to the literature of the subject and one worthy of note, since there can be little doubt that carcinoma of the prostate is more common than statistics show owing to the fact that the malignant nature of some of the cases is at present overlooked as a result of their tendency to be confined to the gland itself. The history, symptoms, and physical signs as observed in the cases forming the basis of the paper are carefully summarised and the histological characters of the various growths are described in detail in all the more recent cases. A paper on the x ray treatment of malignant disease is contributed by Mr. C. R. C. Lyster, in which the results of the treatment are recorded as observed in 46 cases. The indications for the treatment and its limitations are succinctly stated and critically considered. Mr. W. Sampson Handley records the results of a research into the manner of the parietal dissemination of mammary carcinoma in continuation of his previous work. He has studied microscopically sections of the skin around the breast and finds that the appearances obtained support the view of the centrifugal spread of the growth along the meshes of the deep fascial lymphatic plexuses, a process to which he has applied the term of "fascial permeation." A short paper by Dr. W. Gordon Taylor deals with giant cells in sarcomata, which he finds occur only in sarcomata connected with bone, with the single exception of one case of sarcoma of the parotid gland. Dr. J. J. Douglas records the results of a further study of the blood in malignant disease. An interesting, suggestive, and important paper by Mr. A. G. R. Foulerton deals with the subject of chondrifying carcinoma, with a record of three cases. A detailed bibliography is also appended. Mr. Foulerton discusses the nature of the process of chondrification in carcinoma and puts forward a bio-chemical theory to explain it. The paper affords a very notable contribution to a subject which is little understood. As a whole this volume represents good, solid work in the domain of cancer research and does great credit to the editor, Dr. Lazarus-Barlow, and his co-workers.

Manual of Diseases of the Nose and Throat. By CORNELIUS GODFREY COAKLEY, A.M., M.D., Professor of Laryngology in the University and Bellevue Hospital Medical College, New York City; Laryngologist to Columbus Hospital, the University and Bellevue Hospital Medical College Clinic; Consulting Laryngologist to the New York Board of Health, &c. Third edition, revised and enlarged. Illustrated with 118 engravings and nine coloured plates. London and Glasgow: Henry Kimpton. 1906. Pp. 94. Price 14*s.* net.—The third edition of this book is well up to the standard arrived at in previous editions and shows, amongst other additions, a considerable increase in the space devoted to the treatment of the accessory sinuses of the nose. The third chapter contains a very full and careful description of the methods of examining the nose, the larynx, and the naso-pharynx, followed by a short account of the instruments used. The fifth chapter is devoted to the causes of nasal obstruction and its symptoms. Diseases of the nose are then discussed seriatim, though the pathological anatomy is only cursorily dealt with. The appropriate methods of treatment in hypertrophic rhinitis best suited for the various pathological conditions found in this disease are given. In atrophic rhinitis Dr. Coakley has not alluded to the more recent forms of treatment; in fact, the only one which he advises is irrigation and the application of oil sprays afterwards. The treatment of this disease might well be brought up to date, especially in view of the admirable work which has recently been done by Moure in the subdivision of atrophic rhinitis. The author very correctly states that membranous rhinitis is not to be confounded with nasal diphtheria, though it is sometimes difficult to distinguish between the two. Malignant disease of the nose is very briefly discussed. The seventh chapter, that on the accessory cavities, is far superior, as we have said, to that in the previous editions and is now in keeping with the rest of the book. In peritonsillar abscess Dr. Coakley's incision is almost vertical, in contradistinction to that usually employed in this country which is nearly horizontal and which we consider superior. Diphtheria still receives a large amount of attention, though it seems questionable whether a description of diphtheria should be included in a book of this character. Tuberculosis of the larynx is also amply discussed, Dr. Coakley advocating a very conservative line of treatment and condemning the employment of tracheotomy if the patient is not likely to live for more than a few days; though it is difficult to see that such a view is compatible with the dictates of humanity. Paralyses of the various muscles of the larynx are presented by the author to the reader in such a way as to raise no suspicion as to the uncertainty which has existed as to their pathology. The work concludes with a full chapter on therapeutics, with a fair number of prescriptions suitable for the treatment of the various diseases discussed in the book. This is a handy little volume which will form a useful addition to the library of many general practitioners.

Transactions of the Medico-Legal Society for the Year 1904–1905. Edited by R. HENSLOWE WELLINGTON, Barrister-at-law, and STANLEY B. ATKINSON, M.A.Cantab., M.B.Lond., Barrister-at-law. Vol. II. London: Published for the Society by Baillière, Tindall, and Cox. Pp. 117. Price 5*s.*—The Medico-Legal Society is a comparatively new society but the number of its members is gradually increasing and it is likely to be productive of much useful work on the border-line of medicine and law. The present volume contains several papers of considerable interest and the records of the discussions which followed the reading of them. Dr. T. Claye Shaw contributes a paper on an Obscure Form of Alcoholism involving Irresponsibility. He points out that the connexion between drunkenness and crime is so immediate that every detail of the act should be well analysed with the view to explain the question of responsibility. He draws attention to one phase where the signs of inebriety were so masked (though the real loss of inhibition was intense) that only by a special consideration could a right conclusion be arrived at as to whether the individual was to be held responsible or not. If an individual has suffered from inebriety but has been cured the brain centres may resume their natural conditions. In some instances, however, complete recovery does not occur, though the patient may regain the power of the ordinary reflex brain functions to so complete a degree as to deceive those with whom he was usually in contact, whilst he might at the time be in a state of "minus inhibition" and be really dangerous to himself or to others. To the ordinary individual he would pass for a sane person, but he is really unfit for responsibility and his acts are more like those of a somnambulist or of a person in the stage of recovery from an epileptic fit. The Hon. Sir Joseph Walton contributes some interesting Notes on the Law of Evidence, in which he impresses upon his readers that the rules of reasoning and proof which are applied in an English court of justice are, speaking generally, the rules of ordinary logic and common-sense. Amongst other papers we may mention the following: The Definition of Accident, by Dr. S. B. Atkinson; the Law Relating to the Criminal Responsibility of the Insane, by Mr. A. D. Cowburn; Privileged Communications and

Professional Secrecy, by Dr. A. G. Bateman; and Degeneration, its Causes and Prevention, with Reference to the Proposed Sterilisation of Certain Degenerates, by Dr. R. R. Rentoul. Some of the above formed the basis of interesting discussions.

Methods in Plant Histology. By CHARLES J. CHAMBERLAIN, A.M., Ph.D., Instructor in Botany in the University of Chicago. Second edition. London: T. Fisher Unwin; Chicago: The University Press. 1906. Pp. 262. Price 10*s.* 6*d.* net.—The first edition of this book was published in 1901 and embodied the results of a course of histological technique conducted by the author in the University of Chicago. Since that time laboratory methods in plant histology have been much improved and as a consequence the present edition of the book will be found to contain more detailed information than its predecessor. It is divided into two parts—the first dealing with the principles of the preparation of specimens such as section cutting, staining, mounting, and so on; while in the second part these principles are applied to specific cases. This latter portion of the book will be found of particular use to the beginner, for the types selected are such that he will not only find useful practice in the methods of microscopic technique but will be able to form at the same time a satisfactory collection of specimens for study illustrating plant structure from algæ to angiosperms. The directions for collecting and growing laboratory material will also be found helpful. Full details are given with regard to the somewhat tedious Venetian turpentine method of mounting—a method, however, which has been practised with much success by the author and his students. He states that "the surprising beauty of successful preparations will compensate for the large proportion of failures which are likely to occur." The book is well illustrated. The curriculum of the medical student takes up so much of his time that he is not very likely to devote himself to a study of botany in its higher branches, but the book will at any rate prove useful for reference.

JOURNALS AND MAGAZINES.

The West London Medical Journal.—The July number of this journal contains the Cavendish lecture delivered by Sir William Macewen on Some Points of the Surgery of the Lung in which the physiological doctrine that collapse of the lung takes place directly an opening of any kind is made in the pleura is combated and cases are quoted in which the lung remained in contact with the chest wall even after extensive wounds. An instance is recorded in which surgical interference in a case of pulmonary tuberculosis practically saved a patient's life. Under the heading of Proceedings of the Society is recorded an interesting discussion on influenza, dealing especially with the sequelæ and the complications of the disease.

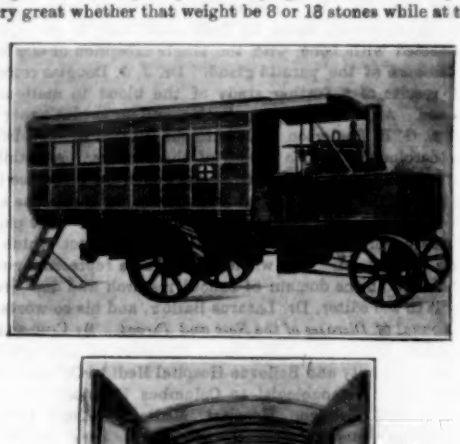
The Medical Chronicle.—The June number of this journal is devoted mainly to the subject of syphilis. It opens with a paper by Dr. W. Hale White on the Clinical Aspects of Visceral Syphilis, which is followed by one on the Present Treatment of the Disease, chiefly from a military point of view, written by Lieutenant-Colonel E. Butt, R.A.M.C. Continuous rather than interrupted administration of mercury is recommended, intramuscular injection being advised as the most convenient method, while local application of mercurial preparations is deprecated. Dr. G. H. Lancashire writes of tuberculous and syphilitic affections of the face. A brief note by Dr. I. Walker Hall and Dr. J. Randal Hutchinson points to the inefficacy of such drugs as ammonium hippurate, citarin, and thyminic acid in controlling the endogenous uric acid in gout.

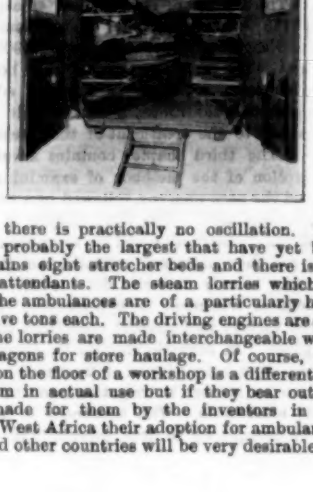
The Bristol Medico-Chirurgical Journal.—The June number of this journal contains three articles of gynæcological interest. Dr. E. W. Hey Groves writes on the structures forming the pelvic floor and on the relation of pain to pelvic displacements; Mr. C. Hamilton Whiteford on diagnosis and treatment of tubal pregnancy; and Dr. Eliza L. Walker Dunbar on the new theory and prophylaxis of eclampsia. This last article is in commendation of thyroid extract as a prophylactic measure and as a remedy after symptoms have set in. Dr. I. Walker Hall records some new methods of clinical pathology, including modes of examining gastric contents, urine, and fæces.

New Inventions.

THE "RASTILON" AMBULANCE SPRING.

Messrs. J. and A. Carter of Great Portland-street, London, W., have fitted to some ambulances built for use in the service of the Portuguese Government over rough roads in connexion with a military expedition in West Africa, a specimen of which is shown in the illustration, a new spring which they have invented and named the "Rastilon." The springs are mounted in a circular box and connected with iron rods carrying the stretcher. The circular box protects them in a great measure from atmospheric influence and they are so constructed as to adjust themselves automatically to the weight which they may be carrying. Their resiliency is very great whether that weight be 8 or 18 stones while at the same time there is practically no oscillation. The ambulances are probably the largest that have yet been made. Each contains eight stretcher beds and there is ample provision for attendants. The steam lorries which carry the bodies of the ambulances are of a particularly heavy make, weighing five tons each. The driving engines are of 45 horse-power. The lorries are made interchangeable with freight-carrying wagons for store haulage. Of course, the testing of springs on the floor of a workshop is a different thing from testing them in actual use but if they bear out the claims that are made for them by the inventors in the rough country of West Africa their adoption for ambulance work in our own and other countries will be very desirable.





THE LANCET.

LONDON: SATURDAY, JULY 28, 1906.

"Christian Science" and the Death of Major Whyte.

THE Attorney-General has ordered that a *nolle prosequi* should be entered in the case of Mr. GEORGE ROBERT ADCOCK, formerly a medical practitioner and still upon the Medical Register, who was recently put upon his trial for manslaughter at the Old Bailey, with the result that the jury disagreed as to his conduct. The course thus taken will evidently commend itself to Mr. Justice BIGHAM who conducted the lengthy trial referred to, for he intimated his opinion upon the subject to counsel representing the prosecution soon after the jury had failed to arrive at a verdict, and there is no reason to believe that his lordship's estimate of the law and evidence was not in every way correct. Mr. ADCOCK was tried not as a "Christian Scientist" who had assisted at the bamboozling of Major WHYTE, and who, by holding out delusive hopes of restoration to health by means of "Christian Science," had brought him to a lingering and a painful death; he was charged with manslaughter on the ground that, standing to Major WHYTE in the relation of medical attendant, he had failed to exercise care, attention, and proper skill towards him, in consequence of which his patient had died. Had the jury been able to arrive unanimously at the conclusion that the accused was called in and had acted as the deceased's medical attendant the second portion of the question propounded to them would probably have afforded them little difficulty. That point, however, is not under discussion; but the general circumstances of the case demand some notice from us apart from the unsatisfactory legal result.

We need not recite the circumstances which led up to Major WHYTE falling into the hands of the "Christian Scientists" or describe the "treatment" meted out to him by others besides Mr. ADCOCK. They are familiar to any of our readers who may be interested in the case from the reports of the inquest in the daily newspapers, and they have been briefly referred to in THE LANCET. It is enough to say that the "treatment," so far as Mr. ADCOCK was responsible for it, was such that, had he been acting in the capacity of the patient's medical attendant, he would have deserved, and doubtless would have received, very severe punishment. It seems, however, to be tolerably clear that although there was evidence that those nearly related to Major WHYTE knew the accused to have been a qualified practitioner, and were basing hopes upon this, the patient himself did not so regard Mr. ADCOCK and did not employ him as his medical attendant, but, on the contrary, would have refused any treatment inconsistent with "Christian Science." At all events there was sufficient doubt in the eye of the law as to the guilt of the accused to justify the division of opinion in the jury which tried him, and a second trial upon the same facts was thus made undesirable. The result of the case is not encouraging to those who see with regret lives needlessly sacrificed, but at all events it makes the situation clearer. Mr. ADCOCK could not be convicted and the other persons censured by the coroner's jury which found a verdict of manslaughter against him cannot be prosecuted. Captain BAYNES, Mr. SMITH, Mrs. GRANT, and all those, from Mrs. EDDY downwards, who are morally responsible with them for such deaths as that of Major WHYTE, are safe, so far as the criminal law at present stands, from conviction for manslaughter. If, however, we are satisfied that the law has no power to punish those who act as the accused acted and as those of like thinking would act, it does not follow that we need regard the law as satisfactory, however difficult its amendment may be. If a medical man's patient dies, and there is evidence that he has been wrongly treated, the medical man may be put upon his defence: he may be convicted and punished, or may be acquitted, according to the degree in which want of skill and care on his part has contributed to the death. If a foolish or designing person, who has abandoned Christianity and has avowed a disbelief in science, calls himself a "Christian Scientist" he may pretend to heal disease by a mumbo-jumbo the absurdity of which places it beyond the reach of reason; yet when his victim dies the law cannot touch the "healer" or the propagandist who has paved the way for him. If a needy and unscrupulous woman rents rooms in the fashionable quarters of great cities and cajoles other women more foolish than herself out of a few sovereigns by the pretence of "telling their fortunes," she may be fined; if a wandering gipsy obtains shillings from servant-maids by similar devices, the "fortune-teller" can be, and is, fined or imprisoned. But as the law stands apparently the "Christian Science healer" can cozen his victim out of life itself by falsely pretending that he has the power to cure disease, and can earn a living by doing so with perfect safety—to himself.

Legislation to meet such a case presents grave difficulties, and the question at once arises for practical persons as to whether such difficulties should be faced or whether we should regard the loss of life which results from "Christian Science" as so trifling that it may be treated as a negligible quantity. The deaths may not be very numerous; "Christian Scientists" are not quite as whole-hearted fanatics as the members of the sect known as the Peculiar People. "Christian Scientists" avoid the awkward consequences which follow the manslaughter of a child through the withholding of medical aid from one not old enough to summon it; and we should probably hear more often of the absence of a medical certificate when adult "Christian Scientists" die if they always unflinchingly carried their professions into practice in the face of great pain or of imminent danger to their lives. Nevertheless, instances of deaths with inquests, and sometimes with abortive prosecutions following them, have been sufficiently numerous during the past few years for the matter to be worthy at least of serious consideration, and the case of Major WHYTE may be taken as illustrating the difficulties to be encountered. He was a man in the prime of life, 44 years of age, an officer in the army who had earned the Distinguished Service Order, and who, unless we assume that the accident which had befallen him and the suffering which had ensued had affected his mental capacity, might

assuredly be regarded as one able to guide himself in the ordinary affairs of life. Is it not possible to interfere directly with such a person if he has once fallen under the influence of "Christian Scientists," covetous of those emoluments which are to be derived from treating a patient able to pay, and perhaps in equal degree ambitious to acquire and to display their baneful control over a fellow creature? It seems to us that it is not easy to promote the exercise of such interference. It is true that we punish an attempt at suicide, although the person who wishes to destroy his own life may protest that he has a right to do so. The case is not analogous. We do not, however, punish those who merely imperil their lives by acts which, however foolish and dangerous, have usually been regarded as lawful. To exercise any interference by means of argument or instruction is, of course, out of the question. Take the case of Major WHYTE as an example. No one would attempt to reason with persons who would wash their sound bodies with soap and water (as we will credit the aristocratic converts to "Christian Science" with doing) but who would decline to allow a suppurating wound to be washed with those cleansing agents which take the place of soap where dirt, less easy to remove than that which adheres to the surface of the skin, has to be dealt with. It is not possible to argue with people so blind to the ordinary conditions of health and disease. The medical treatment, which might have saved the life of Major WHYTE after his bedsores had developed, would have consisted to a large extent in carrying out with scientific completeness those principles of cleanliness which commend themselves to the good sense of all civilised human beings in the present day. If, however, we cannot legislate directly for the benefit of such persons as may fall into the hands of the "Christian Scientist," and if reason cannot be applied with hope of success either to the patient or the "healer," it may still be possible to deal with the latter as with one who deceives others by false pretences to the danger of their lives, or, in other words, as one who pretends to the title of "healer" without being qualified to heal. The legislature has recognised in the recent Midwives Act a principle which many hope to see extended some day, so as to protect a wider public. In a few years' time no woman will be able to practise as a midwife for gain who has not qualified by actual learning as a midwife, in addition to being registered as such. The purpose of legislation here has been to protect the lives of the public from pretenders to exact knowledge; and in another column of this issue of THE LANCET (p. 249) will be found a brief article showing the valuable work that is done under the Midwives Act. If those who pretend falsely to be able to heal others are rendered legally punishable, deaths under "Christian Science," and under many other forms of charlatanry and quackery, will cease to a considerable extent.

Old Houses in the Country.

IT is an unfortunate fact that the canons of art and of hygiene are so rarely satisfied by the same object. The prettiest garments are often those most unsuitable in the eyes of a physician, the most delightful scenery may be marred by a miasmatic atmosphere, and in the same way a house that presents every charm to the eye may have defects which no sanitarian can overlook, even if they do not render it an unsavoury object to the nose. At the present time of the year, when so many people are about to take their annual country holiday, this question of the healthiness of country houses becomes unusually interesting and important. The present preference for old things in matters of art extends also to the choice of country houses. People are paying huge prices for Chippendale chairs, and they are prepared to be equally extravagant for houses and cottages belonging to the same or an earlier period. It is worth while to pause for a moment and to consider whether a beautiful appearance may not be too dearly bought in the matter of houses. A lovely exterior is well enough but the unromantic drains are of more importance. All educated persons know this nowadays and to utter a word of warning against the undue value often given to the one and the lack of consideration bestowed upon the other may seem unnecessary. But knowledge does not keep the world from foolish actions when fashion, the lust of the eye, and similar powerful impulses are at work. It is natural enough, that when a man chooses a house in the country the general aspect of the residence should largely influence him. Caught by a pleasant situation, by old walls and creepers and mellow tiles, by convenient accommodation and accessories, the man who is taking a house for his family's country holiday is likely to lose sight of the unobtrusive drainage system. He knows that he ought to make inquiries upon the subject and probably he does so in a perfunctory way, but what he does not know is that habitation of a certain kind of old house must be attended with risk. A good drain is a good thing but it will not counterbalance all the unhygienic disadvantages of warped, imperfect flooring, attics and garrets loaded with the dust of ages, dark corners, and noisome cupboards. Yet too often the beautiful Queen Anne or Georgian house has all these drawbacks and the paterfamilias who hires it may be but poorly rewarded for his expense if the stay in the country instead of resulting only in rosy cheeks and renewed appetites bestows upon his household an affliction of sore-throats, or worse, of diphtheria, or typhoid fever. We are not conjuring up imaginary terrors, for we speak with the recollection of concrete instances that doubtless many of our readers can match only too fully. In fact, nobody would try to deny that there are many old houses where sanitation, disregarded according to our modern notions when the mansion was built, has never been allowed to come into its own. That such was the case with some of the great country seats of England has been clearly shown in several instances which are now historical. Striking examples were afforded by that outbreak of typhoid fever at Windsor which robbed England of Queen VICTORIA'S Consort and by that other attack which so nearly cost the country her present beloved Sovereign. Windsor Castle has since been put in thorough sanitary order, but some of our most famous palaces cannot be so treated, at least in a satisfactory manner, their whole fabric being opposed to genuine hygienic treatment.

Grave drainage defects are naturally, then, to be found much more commonly in old houses, and it is just old

houses that at present all the world is looking for when it seeks a country holiday resort. Country air is an excellent thing and to live in a beautiful house is conducive to good health, as every constant source of pleasure and of peace must be, but an old house takes a lot of overhauling and if it is not thoroughly overhauled its beauty may be too dearly bought when to its æsthetic charm are added its leaking pipes or its ineffective water-closets. Too many old houses in the country rely for their drainage upon a water system that will not stand the test of a thorough examination. As is the case with so many other matters, a complicated system imperfectly carried out is worse than a simpler method properly executed. It is far better to have earth closets than water-closets imperfectly flushed. And it is the latter that are far too frequently to be found in the country. Again, inefficient means for the disposal of kitchen refuse and of bath and bedroom waters are only too often to be found in old country houses, and the pity of this is the greater in that with proper arrangements a valuable manure is forthcoming from these various quarters. The well-drained house should never be a possible source of infection to its inmates, but it should, in fact, become a centre of nourishment and of support to its neighbouring vegetable, fruit, or flower garden. Our excellent contemporary the *County Gentleman* remarks in a recent article, which has drawn our attention to the subject of country houses, "Intelligent people on coming down to the country ought to be ashamed of fouling ditches and little water-courses by a crude and lazy system of drainage; the proper destination of kitchen wash and slops is the vegetable garden." This is another of the things that is well known to all educated people and yet how seldom is it carried into practice in England.

We have alluded chiefly to the question of taking a house in the country for a short term of residence partly because this phase of the question is topical and partly because when an old house is purchased nowadays it is usually put into as complete sanitary repair as possible. Not always, however, and our remarks apply with point to those who purchase or hire for a long term an old country house for habitual week-end use. Habitation being fitful the same thorough re-drainage does not always occur. The temptation to take a picturesque house or cottage—and to risk the drainage—is, in these circumstances, strong upon some. It is, in fact, a very costly matter to make really healthy homes of these old cottages and houses. When the walls and roof have been properly attended to, when the drainage system has been thoroughly renovated or installed anew, when the floors and ceilings have been purged of "undesirables," and when baths have been added, an amount of trouble and money will have been expended that would have gone far towards placing a new house upon the desired spot. We willingly admit our admiration of old houses and picturesque cottages, but when it is a question of living in them, even if only for a few days at a time, we hold that their hygienic perfection should be the first thing to be considered. Theoretically the public holds exactly the same view, practically they allow their sense of the picturesque to get the better of their reason. They allow themselves to believe that a little tinkering here and there will set right an absolutely unhealthy fabric.

Official Regulations and Professional Secrecy.

IN another column we publish a letter from a correspondent in India in which are raised questions affecting the relations of a medical man holding an official position which are of importance firstly to his patients and secondly to his official superiors and perhaps to the official superiors of the patients. Our correspondent desires our opinion upon these points and all must agree that the matters at issue are of the sort that require careful deliberation. It must be remembered that many problems in medical ethics resemble the unsolved problem of three bodies in dynamics, the extent and results of whose mutual attractions cannot be estimated. The relation of the medical man to the patient is clear, the relation of the medical man to his superiors is also clear, but the inter-relations of all three are most complicated. The solution of the problem must therefore be sought along the lines of that peculiarly British mental attribute—compromise.

The first question asked by our correspondent relates to the duties of a medical officer towards a regimental officer reporting himself sick with some complaint to which a certain amount of shame attaches—e.g., gonorrhœa. Medical officers have to fill up two classes of forms concerning both men and officers reporting sick. The one class necessarily contains full information upon the case and is sent in to the Medical Department of the army, whether it be the Indian Medical Service or the Royal Army Medical Corps. The other, which reports the weekly state of the case, goes to the commanding officer for his information. It is not supposed to be a confidential document and is liable to be seen by other officers and by orderly room clerks and the like. Spaces in the form are provided for the names of patients and for their diseases. Our correspondent asks his question as concerning officers alone, but we may say at once that his duty as a medical man is exactly the same whether his patient be an officer or a private. To a medical man all patients are equal. As disease is no respecter of persons, so a sick man is to his medical adviser merely a patient, and the laws of professional honour as regards secrecy are the same in all circumstances. The nature of the disease should be a matter solely between the medical officer and the patient, whatever the patient's grade in the service, and if only the medical officer and his patient were in question the matter would be comparatively simple. But here the third party to the problem comes in—namely, the authorities whose regulations lay down rules for the conduct of the army. It is obviously impossible for the medical officer to satisfy his duty to his patient and to the superiors of both himself and the patient, for on the one hand silence is demanded of him and on the other speech. The direction which compromise might take is at once indicated. We do not presume to lay down any rule for the conduct of the medical officer, for of course he must obey the regulations unless it is generally understood that he will not be found

to blame for any technical infringement of them. We should say that the medical officer might very well consult the commanding officer as to the desirability of leaving the disease column blank in the report of the weekly state, which is copied in the orderly room, while at the same time he might, if required, hand in a private report to the commanding officer in which the disease column was filled up. If the commanding officer refused to allow this procedure the medical officer would have his choice of two courses. He could, having satisfied his medical conscience, carry out the regulation of the service to which he is bound or he could throw up his commission.

A second point raised in the letter to which we refer is as to what a medical officer should do when a regimental officer insists upon employing him and a civilian medical officer separately during the same illness, neither medical man being told that the other is attending. In this case the answer is more easy to give. The medical officer attached to the regiment should on learning the facts of the case lay them before his superior—i.e., the principal medical officer or before the officer commanding the regiment. In such a case it is probable that the medical officer would be relieved by his official superiors from the duty of professionally attending the regimental officer, although the former would still be bound to enter the name of the latter upon the official sick list. Practically speaking, we believe that medical officers as a rule find no difficulty in carrying out their work in conformity with the regulations; but, as we have said above, no hard-and-fast rules can be laid down for any general scheme of conduct. Each case of medical ethics must be treated on its merits and in cases where official duties clash with what would seem to be rules of professional secrecy PETER SIMPLE'S remark to Captain SAVAGE may be borne in mind. "Whoever heard of confidence between a post captain and a midshipman?" said Captain SAVAGE. "No, sir," replied SIMPLE; "not between a post captain and a midshipman, but between two gentlemen." A young medical officer may find himself torn between his duty as a medical man to his patient and his duty to his official superiors as laid down in the regulations. He will, we are sure, always find his regimental commanding officer, his principal medical officer, and his brother regimental officers ready to help him to the solution of hard problems, not as his official superiors but as comrades, and he will not do wrong if he consults them and asks their help.

INSTITUTE OF CHEMISTRY OF GREAT BRITAIN AND IRELAND.—Of 14 candidates who entered for the Intermediate Examination held in July the following nine passed: L. C. W. Bonacina, W. R. S. Ladell, D. J. Law, W. M. Seaber, B.Sc. Lond., P. Stutfield, J. M. Weir, M.A., B.Sc. St. And., W. A. Whatmough, J. M. Wilkie, B.Sc. Lond., and C. H. Wright, B.A. Cantab. In the Final Examination for the Associateship (A.I.C.), of three examined in the branch of mineral chemistry, two passed: J. W. Agnew and I. M. Heilbron: of three in the branch of organic chemistry, two passed: R. Le Rossignol, B.Sc. Lond., and G. W. Monier-Williams, M.A. Oxon., Ph.D. Freiburg; and of eight who entered in the branch of the analysis of food and drugs, and of water, including an examination in therapeutics, pharmacology, and microscopy, the following six passed: J. G. Annan, B.Sc. Lond., C. T. Bennett, B.Sc. Lond., G. W. Glen, F. W. Harris, E. H. Merritt, B.Sc. Lond., and F. Tattersfield.

Annotations.

"Ne quid nimis."

THE PROPOSED UNION OF LONDON MEDICAL SOCIETIES.

ANOTHER step towards the proposed union of London medical societies has been taken since we last referred to the matter[1] and we now have before us the report of the organising committee. This report has been printed after amendment and adoption by the general committee of representatives of the societies and it should now receive the close attention of all individual members of the various societies. The societies are invited to consider the report, and if they approve of the scheme as therein drawn up, to appoint representatives upon a new committee. This committee, together with the Presidents of the Medical Society and the Royal Medical and Chirurgical Society, will form the first council of the new society. The report shows clearly that very careful financial investigation has been carried out and we do not think that the organising committee has included any unwarrantable hypotheses in its estimate of the financial position of the proposed new society. Many difficulties of very various kinds have, we know, been met in the course of the proceedings which have culminated in this report. All the different societies concerned have had, and must have taken, full opportunity of pointing out the obstacles to the success of the scheme. That such wide freedom of discussion in a matter of this kind should be encouraged was, of course, the only manner in which a sound ultimate success could be achieved. It says much for the perseverance, energy, and capacity of the organising committee that so definite and tangible a project should now be before us, and it will, we think, be matter for deep regret if the one or two remaining opponents cannot see their way to reconcile the best interests of their societies with the best interests of the profession in London at large, and these are undoubtedly most to be served by amalgamation. We need not repeat the arguments which we brought forward in favour of the scheme so long ago as July, 1905.[2] None of much weight have been urged on the other side, the only obstacles arising from comparatively small and individualistic considerations. We do not believe that in such a way members of a profession, which of all others should be by its nature and training open to wide and liberal views, can be deterred from a step that is certain to conduce to their dignity, their advancement, and their convenience. Our lady colleagues, whose case presented at first one of the most awkward problems in the scheme, have set a good example. They are coming in as members of those sections which correspond to societies which at present have women members, and are leaving the question of Fellowship for the future to decide. The scheme as outlined in this report contains just provision for the actual demands of those bodies that will contribute property, money, a library, or a museum to the common possession of the new society. A finance committee will be formed on which will be represented, as is especially stated, each of those bodies which are bringing in funds. As regards libraries we may point out that Fellows or members of the Medical, Obstetrical, Odontological, and Ophthalmological societies are to have the privilege of using the library of the new society without payment of the annual library subscription. Perhaps the next most difficult question with which the committee

[1] THE LANCET, Feb. 3rd, 1906, p. 311.
[2] THE LANCET, July 29th, 1905, p. 301.

had to deal was that of the publication of the proceedings of the various sections. There are some societies the published transactions of which form the chief attraction in the case of many members. This applies particularly, of course, to those societies the membership of which is to a large extent a country one. We may instance the Society for the Study of Disease in Children and the Society of Anæsthetists. In the case of both these bodies much pains have been bestowed upon, and great value has been attached to, the yearly volumes of "Transactions." Members of such societies need not fear, it seems to us, that they will in any way be losers if the proposed amalgamation comes into force. The monthly publication which is alluded to in the report should adequately fill the place of the specialist "Transactions." Reading the report, as we have done, in a critical spirit we find little to cavil at, and we look forward confidently to the materialisation of the scheme when the societies have once more considered the matter in detail and have nominated their representatives.

JUVENILE SMOKING.

Now that the evils of smoking by juveniles are acknowledged by a Select Parliamentary Committee it may be presumed that some endeavour will be made to stop the sale of tobacco and cigarettes to children below a certain age. Two Bills drafted with this end in view were submitted to the consideration of the committee which agreed with the aims of both that introduced by Lord Reay and that drafted by Sir Ralph Littler, K.C., but the members concluded that the latter was the more workable of the two. They therefore were led to recommend that legislation should proceed on the lines of Sir Ralph Littler's Bill, to which, however, they suggest that certain important additions should be made. It cannot be supposed that the proposed measure will operate smoothly or that its provisions will reach all offenders. The utmost that can be hoped for is that it may be able to deal with particularly flagrant cases. The age limit, for one thing, will be certain to give rise to difficulties. In Sir Ralph Littler's Bill it is enacted that the person who sells or delivers cigarettes (the use of this word implies the giving of a cigarette to be an offence) to any child under the age of 16 years shall be liable to a penalty, and further that every child under the age of 16 years who shall be found in possession of cigarettes or found smoking tobacco in any form shall be liable to a similar penalty. It will be admittedly therefore a good defence if the age is proved to be above 16 years but in an addition to the Bill suggested by the committee it is provided that "police constables should be empowered to stop all youths *apparently* under 16 seen smoking in any public place and they should also be allowed to confiscate any tobacco found upon them." We have put the word "apparently" in italics as its retention might lead to distinctly unjustifiable proceedings. There are scores of youths surely who are over 16 years of age and who might even be 18 years of age, who, nevertheless, are "apparently under 16." The same word is used again in a further clause added by the committee which is as follows: "The Act should apply to all children apparently under the age of 16." The use of the word "apparently" in the clauses of any Act in which limits are laid down is calculated to render its successful administration very difficult. We should think that such a word has a too indefinite meaning for employment in a statute. We can, however, well understand the object of using the word; the police and the public are asked to differentiate broadly between "the little nipper"—the undeveloped boy—and the youth who is well on the road to manhood. It would be better therefore, we suggest, if the word "apparently" could be replaced by the word "obviously." It is of no use attempting to differentiate too finely in this matter. Lastly, there will be a difficulty in regard to the suggestion that the juvenile purchaser of tobacco in any form, who is genuinely employed by his father to fetch tobacco for him, should be exempted. If legislation is seriously demanded in this matter and is to be effectual no such exemption can be admitted. No child under a certain age is allowed to be supplied with drink at a public-house for the purpose of carrying that drink to his parents' home and though the associations of the public-house are not comparable with those of tobacco shops, yet for the purposes of the Act there seems to be no difficulty in meeting this provision nor is there any particular hardship forced on anyone. There can be little doubt that smoking in the case of juveniles is an evil and where it exists every endeavour should be made to suppress it, but that this can be effectively done by statute we have little confidence. The youth who smokes is, as a rule, not without a knowledge of the subtle ways of the world and the devices of unprincipled men, and in a great number of cases he will be encouraged to pursue his pernicious habit in a surreptitious manner as soon as the law prevents him from smoking in the present unchecked and open way. He is generally the wicked sort of boy who will likely enough find greater zest in smoking when he realises that he is setting the law at defiance at the same time. In a word, the Juvenile Smoking Bill does not reach the root of the matter. The moral training of the class of small boy who smokes wants considerable strengthening and above all parents should be brought to feel a stronger sense of responsibility in regard to their duties to their offspring than they have shown in the past.

THE DECHLORINATION TREATMENT OF DROPSY.

IN the *Scottish Medical Journal* for February Dr. F. D. Boyd has called attention to the value of the dechlorination treatment of dropsy—a method which we owe to the French and which has had little vogue in this country. Widal pointed out that in renal disease when sodium chloride accumulates in the body œdema results and albuminuria increases. On the other hand, when sodium chloride is withheld from diet the albuminuria diminishes and œdema may disappear. Dr. Boyd relates the following striking example of the value of this treatment. A man, aged 57 years, was admitted into hospital with swelling of the legs, the abdomen, and the hands. For 25 years he had suffered from attacks of bronchitis every winter. Ten years before admission he first noticed swelling of the ankles. In the last four years he had suffered from frequent attacks of dyspnœa and had seldom been free from œdema of the legs. For three months he had been confined to bed. On admission there were bronchitis, general anasarca, ascites, considerable effusion into both pleural cavities, and dilated heart. The radial artery was thickened and the blood pressure was low. The urine was scanty and contained albumin but no formed elements were found. A light diet and one and a half pints of fluid were given in the 24 hours. During the next six days the œdema slightly increased and the arterial pressure rose. Then a salt-free diet, consisting of bread made without salt, meat, fish, and fowl cooked without salt, and potatoes cooked without salt and eaten with fresh butter, was prescribed. The amount of fluid taken was kept at one and a half pints in the 24 hours. On the second day improvement began; the arterial pressure fell, and the quantity of urine more than doubled. Diuresis was maintained until all œdema had disappeared. The intake of chlorides on this diet was about two grammes in the 24 hours. There was an enormous excretion of chlorides which followed closely the excretion of water. The weight of the patient fell from 190 to 132 pounds and in 17 days he became free from the œdema, which had lasted for years. Cryoscopy showed a marked depression of the freezing point of the blood, indicating

renal inadequacy. The blood contained 0·58, fluid taken from the legs 0·75, and fluid taken from the chest 0·74 per cent. of sodium chloride. The latter figures are excessive. The amount of chloride in the blood remains fairly constant. When chloride is taken in excess of the excretory powers of the kidneys it accumulates in the tissues and œdema results. When chloride is withheld from the diet the converse occurs: chloride passes into the blood and œdema disappears. Of course, other factors are concerned in the production of dropsy. Yet frequently, even in dropsy resulting from grave cardiac and renal disease, Dr. Boyd has seen œdema disappear on withdrawing salt from the diet when all other means failed.

THE RECOVERY OF RESIDUES FROM BRINE AND THEIR UTILISATION IN THE ROUTINE TREATMENT AT SPAS.

IN an interesting communication which we have received from Mr. F. Bale of Droitwich he points out that at Droitwich and other places in this country where the manufacture of common salt is carried on there have been thrown away for centuries or practically made little use of some of the best constituents of the brine. The ordinary scale which is produced in the evaporating pans together with the mother liquor which contains mineral constituents more soluble than common salt, such as magnesium chloride and sodium sulphate, can be utilised, he states, for the production of excellent mineral waters for drinking and other purposes, thus adding an important detail to the equipment of the health spa. The mother liquor may contain, according to the degree of concentration, as much as 25 per cent. of the sulphates of calcium, magnesium, and sodium. If this mother liquor is diluted with water and "salt scale" is added a mineral water is obtained, effervescing, he says, with oxygen. The disengagement of oxygen is singular and apparently proceeds from the dissolution of the hydrated sulphate of calcium which is the chief constituent of the "salt scale," although no chemical explanation of this production of oxygen gas is forthcoming. The evolution of gas is steady and goes on slowly for days, ultimately saturating the water. We presume that Mr. Bale has satisfied himself that this gas is oxygen as its development is a little difficult to account for. He regards the mineral water so obtained from these concentrated constituents of the brine as approximating in composition to the waters of many celebrated spas, while he attaches an added value to it owing to the surplus of oxygen gas with which it is charged. It follows, he thinks, that the districts of this country which possess brine baths may now also possess that which they require as a necessary adjunct to balneotherapy—a medicinal water for drinking. Moreover, a water evolving pure oxygen gas is not likely to contain organic impurities and conceivably oxygenated water may supply a therapeutic need.

THE WILL OF MR. ALFRED BEIT.

THE late Mr. Alfred Beit in his will dated April 18th, 1905, records that he was a naturalised British subject living in England. The provisions of the will show that the testator was a man of broad ideas and one who had the welfare of his fellow men actively at heart. Nor are the bequests tied down by conditions which in after years might become onerous or impossible of execution. For instance, he leaves his estate of Borstler Jäger, near Hamburg, to be held in perpetuity for ever for the benefit of the people of Hamburg and Gros Borstel, intact and unbuilt upon, but should the authorities of the city find this impracticable they may, after 20 years from the date of the testator's death, realise the whole or part of the property and may apply the proceeds to charitable, educational, or public purposes for the benefit of the State of Hamburg. Among other bequests specially interesting to the medical profession are a sum of £20,000 to the Central Institute of Medical Sciences Fund, London University, £20,000 to King Edward's Hospital Fund, and £20,000 to Guy's Hospital. A remarkable bequest which may have a far-reaching influence upon the health of present and future generations in Africa is one of £1,200,000 for methods of transmission, such as railways, telegraphs, and telephones in connexion with the Cape-to-Cairo Railway. It is only necessary to read the record of African travel to see how the formation of a railway will do away with the appalling loss of life which occurred among past travellers, whether among themselves or the carriers of baggage. It is true that the opening, or at least the construction, of a railway through hitherto unopened territory is often accompanied by the spread of such diseases as malaria or yellow fever, but these can be guarded against. But once the railway is opened trade communication is rendered rapid and easy. Altogether the will is a striking example of how the possessors of great wealth may be benefactors of their species.

A YEAR'S WORK IN THE GOVERNMENT LABORATORY.

THE report of the principal chemist (Dr. T. E. Thorpe) upon the work of the Government Laboratory for the year ended March 31st, 1906, was published last week. In the Customs branch of the laboratory the total number of analyses and examinations made during the year was 52,140 as compared with 49,751 in the preceding year, being an increase of 2389. In the Excise branch of the laboratory the number of analyses and examinations made was 106,799. In the preceding year the number was 88,757, so that an increase of over 18,000 occurred, which was due mainly to the large number of samples of offal tobacco submitted to examination in accordance with the regulations under which such tobacco is presented for drawback. The number of samples of food and drugs referred to the Government Laboratory under the Sale of Food and Drugs Act was 101, against 109 last year. In the case of 100 samples so examined the conclusion of the Government analysts differed from those of the public analyst in ten instances (i.e., 10 per cent.). In the previous years the conclusions differed to the extent of 9·5 per cent. and in 1904 to the extent of 14·4 per cent. Public analysts are thus to be congratulated on the generally high standard of their work and Dr. Thorpe has contributed to this result by adopting uniform methods of analysis and making them known. The result is all the more satisfactory when the small number of referred samples is compared with the many thousands usually examined in the public service which are not so referred. It is interesting to note that the Government chemist agreed with the opinion given by an analyst in one case to the effect that a sample of brandy had been mixed with spirit which was not brandy. In the Customs department there was a considerable increase in the number of samples of enumerated spirits examined, due chiefly to spirits being entered as "brandy," the correctness of this description being questioned by the landing officers. In a number of cases the spirits did not correspond with the genuine brandy of commerce and were accordingly charged at the higher rate as unenumerated spirits. It is gratifying to see that at last the Excise authorities are turning their attention to the discrimination of spirits in the way indicated and we may be pardoned for claiming that we are the authors of this reform by our exposure of the adulteration of brandy with foreign spirit. The practice of filling chocolates with a strongly alcoholic liqueur appears to have been abandoned, as out of 44 samples examined a considerable number was practically free from spirit. As

regards tobacco, liquorice and glycerine appear to be the chief foreign ingredients added, which agrees with our own statements on the subject. Other substances found were logwood and paraffin wax, neither of which, of course, is poisonous. 19 samples of cigarettes were found to contain percussion caps and in one gunpowder was found. These were doubtless added to assist the combustion of the tobacco but it may be pointed out that nitrate of potassium is frequently a normal constituent of tobacco leaf. There seems to be an increasing importation of "skim-milk" cheese which comes chiefly from Holland. In one instance the cheese contained only 3·3 per cent. of fat. An interesting observation was made in regard to the examination of certain fishes taken from a river which was believed to have received the arsenical drainings from a mine in its vicinity. Arsenic was found to be present in the fish, and in another instance salmon peel taken from a stream at Lostwithiel, and supposed to have been poisoned with copper from mine drainage, were found to contain an appreciable quantity of copper. Altogether the annual reports from the Government Laboratory are invariably full of matters of interest to the nation and the one just issued is no exception.

DIAGNOSIS BY SMELL.

THE very interesting letter from Dr. J. Burton Cleland in our correspondence columns last week[1] gave several examples of diseases and conditions which might reveal themselves to the sense of smell of the medical adviser. He instanced diabetes, enteric fever, acute rheumatism, plague, and retained placenta. The use of the nostrils in practical life is continually being more or less ignored. The mouth-breather forgets that originally the breath of life was breathed into man's nostrils; too often he breathes the breath of death through his mouth, for by the use of that channel he forfeits one of the protective mechanisms with which he has been endowed. Nostril breathers are able to detect at once if any putrescent nidus is in the vicinity and thereupon they will remove it or else themselves. It is notorious that the sense of smell (the "scent") of animals is often highly developed. It is stated that the odour emitted from a small-pox patient will attract cheetahs from afar; flies soon settle on decomposing matter, on tuberculous sputum, and, as was a common experience during the late South African campaign, over the heads of enteric fever patients. A peculiar smell with its associations is vividly recalled when perhaps years later it next reaches the olfactory area. Among other diseases than those above mentioned which can be diagnosed, with more or less certainty, by the sense of smell are abdominal fistula, bronchiectasis, cancers (undressed), some cases of erysipelas, favus (acetamide), some cases of fracture of the skull, gangrene of the lung, ozæna fœtida, hæmorrhoids (bleeding), pyæmia, septic mouth, stillicidium urinæ, and undressed varicose ulcers. The odours of excreta are sometimes a useful aid to diagnosis; thus tuberculous sputum smells like soaked bread. It has been noticed frequently that after conducting a post-mortem examination upon a highly-odoured corpse the fæces of the operator will for about two days emit a similar stench. Drugs may reveal themselves in the breath or otherwise and thus give a clue to the malady for which they have been prescribed—thus alcohol, antimony, assafœtida, garlic, and iodoform. Similarly, a man who constantly when in public sucks a cachou or a mint-drop probably has very bad teeth and consequently foul breath. There is one caution which must be heeded—there may be an error in the observer's own nostrils; he may have lost his own sense of smell, as after an attack of influenza or having taken alcohol himself he may fancy he detects its odour in the breath of a person under examination. Finally, it would be useful to know if it is common for a smell to appear as an epileptic aura and if it ever happens that we smell in our dreams.

[1] THE LANCET, July 21st, p. 188.

THE IMPERIAL CANCER RESEARCH FUND.

THE annual meeting of the Imperial Cancer Research Fund was held on July 25th at the Examination Hall of the Royal Colleges on the Embankment. Reports from the executive committee, the general superintendent, and the honorary treasurer were read. It was announced that the difficulty which had arisen with the Post Office concerning the transmission through the post of specimens of cancer had been satisfactorily cleared up in the month of March. The report of Dr. E. F. Bashford, the general superintendent, contained matters of great interest concerning the growth of cancer and the possibility of protecting mice from the consequences of experimental cancer. Dr. Bashford points out that the results of these experiments "only indicate the possibility of rendering normal mice unsuitable for the growth of experimental cancer. They have not enabled us to arrest the progress of experimental tumours, far less to effect the cure of the disease occurring naturally." It is well, we think, that the report should contain these words, for the members of the public at large are only too prone to catch at any straw which may appear to offer a chance of saving themselves from the abyss of cancer. We are beginning to see light on the problem but only a glimmer. We hope to treat the matter contained in the report at greater length in a future issue.

TREATMENT OF DIPHTHERITIC PARALYSIS WITH ANTITOXIN.

THE value of antitoxin in the treatment of diphtheria is now one of the best-established facts of therapeutics. But antitoxin does not appear to be used after the attack for the treatment of the most important sequel—the paralysis. At the meeting of the Société Médicale des Hôpitaux of Paris on June 15th M. J. Comby read an important paper on this use of antitoxin, to which we have previously referred.[1] He first published this treatment in July, 1904, and since that time a number of successful cases have been recorded by himself and other French writers. The following is an example. A man, aged 50 years, contracted a sore-throat for which only local treatment was used. Some days later he noticed a nasal intonation of the voice and regurgitation of fluid through the nose. These symptoms were only ephemeral, but some weeks later he had difficulty in walking and soon he became unable to leave his room. On examination atheromatous arteries, absent knee-jerks, and an aortic systolic murmur were found. Suspecting diphtheria, though entertaining the question of a vascular lesion of the nervous system, four injections, making a total of 80 cubic centimetres of antitoxin, were given in four days. Almost immediate improvement ensued and recovery took place in eight days. In another case a girl, aged 14 years, was admitted into hospital on March 24th last. On Jan. 14th she had a severe sore-throat, with formation of membrane, which was not treated with antitoxin. A short time afterwards the voice became nasal, liquid regurgitated through the nose, and there were strabismus and diplopia. These symptoms lasted only for a short time. A fortnight before admission she had difficulty in walking which increased until the lower limbs were completely paralysed. The upper limbs were affected in less degree. There was also paralysis of the trunk and neck; the child could not sit up in bed or lift the head. The knee-jerks were absent. In a great number

[1] THE LANCET, Juy 7th, 1906, p. 54.

of muscles both galvanic and faradic excitability was abolished. On March 25th and 26th two injections of 20 cubic centimetres of Roux's antitoxin were given, and on the 27th, 28th, and 29th three injections of ten cubic centimetres (70 cubic centimetres in all). On the second day of the treatment the patient easily moved her legs. At the end of the treatment she could sit up in bed. After a week recovery was complete except that the knee-jerks were still absent. M. Comby has treated nine cases of diphtheritic paralysis by this method and in all rapid recovery occurred. In most of the cases the paralysis was severe and took a generalised or an ascending form. Previously fatal cases of his cases of late diphtheritic paralysis were several. M. Comby drew the following conclusions. 1. Every case of diphtheritic paralysis, early or late, localised or generalised, should be treated with antitoxin. 2. The injections should be given on several days in succession in doses of from ten to 20 cubic centimetres, according to the age, so that a total quantity of 60 to 80 cubic centimetres of Roux's serum is given. 3. These injections are usually well tolerated and only exceptionally produce any symptoms. 4. Neither the age of the patient nor his previous state of health is a contra-indication. The injections should be given even when antitoxin has been administered in the stage of sore-throat.

THE COMPLICATIONS OF MUMPS.

AN interesting letter relating to the serious nature of the complications which may be associated with mumps in adults was published in THE LANCET of July 21st by Major F. Smith, R.A.M.C. In an outbreak of that disease among some troops under his charge Major Smith found that five cases out of a total of 11 had more or less serious complications, and he enters a noteworthy plea for the more serious consideration of that disease which is too often regarded as of a trivial character. Although mumps or epidemic parotitis is a highly contagious disease, yet the susceptibility to infection after exposure seems less general than in the case of many other specific contagious diseases; as a consequence, not a few escape infection in childhood, but epidemics from time to time occur in young adults, notably among soldiers or recruits. Several epidemics of this kind with a considerable proportion of serious complications or sequelæ have been recorded by French army surgeons. Moreover, second attacks of the disease, though rare, are by no means unknown and the attacks in these circumstances are often severe, according to Danchez.[1] The severe cases of mumps and those characterised by serious complications occur for the most part in those above the age of 12 years and particularly in adults. The list of complications and troublesome after-effects is a long and formidable one according to recent observations, and these are not necessarily associated with marked local conditions. Indeed, severe local complications are extremely rare. Suppuration in or about the gland is very uncommon and is then doubtless due to a secondary septic infection by way of the ducts of the glands; gangrene of the parotid gland is of even greater rarity. The facial paralysis which appears in some cases is probably due to compression of the facial nerve or to extension of the inflammatory process to its sheath, since it is a rule partial and temporary, recovering without special treatment in from six to ten days. It was observed seven times in 60 cases among young soldiers recorded by Courand and Petges.[2] Suppression of the salivary flow has also been observed to follow mumps.[3] Among the most serious complications are the so-called metastatic inflammations or metastases. These are doubtless due to the further spread and activity of the specific causative agent. The peculiarity of the special liability to infect the genital glands has long been known and orchitis is generally recognised as one of the most serious complications of the disease. It may occur without any parotid inflammation in rare cases and the possibility of this should be borne in mind during the course of an epidemic of the disease. It more usually occurs in the third or fourth week of the disease and lasts for a week or less, being not infrequently followed by rapid atrophy of the testicle affected by it. Comby found that this atrophy occurred in 103 instances among 163 cases of orchitis following mumps. Ovaritis, salpingitis, vulvo-vaginitis with œdema of the vulva, and mastitis occur in female cases, but more rarely. A singular difference between the incidence of the secondary inflammations in the two sexes is that whereas orchitis occurs almost invariably after the age of puberty, the ovaritis, vulvo-vaginitis, and mastitis may occur in young female children. It has been stated that pancreatitis may occur after mumps, and a case has been described[4] in which a boy developed pain in the abdomen on the fourth day with a tender swelling in the epigastrium. Lacrymal mumps has also been described by Hirschberg. Among the complications of the disease those affecting the nervous system demand special notice. High fever associated with delirium may occur in uncomplicated cases, probably from toxæmia, but occasionally signs of meningitis and even of involvement of the brain itself are observed and such signs have occurred in nearly all the fatal cases hitherto recorded. Peripheral neuritis has also been occasionally observed to follow the disease. Major Smith observed marked weakness of the lower limbs in several of his cases. Acute mania was observed in association with the disease by Dr. R. Percy Smith.[5] Of affections of the special senses, one of the most common and serious is deafness, which may be due to otitis from spread of inflammation to the middle ear by the Eustachian tube, when it is usually recovered from, or to an actual incurable nerve deafness from affection of the labyrinth or of the nucleus of the auditory nerve. This condition may occur in the second week and may be preceded by tinnitus, vertigo, vomiting, and fever. Optic neuritis followed by atrophy has also been described but it is a sequel of extreme rarity. Other conditions described as occurring in association with mumps are endocarditis, pericarditis, arthritis, nephritis with uræmia, albuminuria, epistaxis, pneumonia, digestive disturbances with jaundice, enlargement of the spleen, and certain skin eruptions. The mildness of the typical disease as it occurs in children and the rapidity with which convalescence follows in uncomplicated cases have served to distract attention from the severe character of some of the associated conditions, and since many of these are more likely to occur after neglect or exposure during the course of the disease it is obviously of great importance that even in mild cases, especially in adults, the utmost care should be taken to treat them seriously and from the first appearance of the symptoms. Major Smith's interesting letter serves a useful purpose in emphasising the importance of the recognition of the serious character of the disease.

[1] La France Médicale, July 21st, 1900.
[2] Archiv de Médicine et de Pharmacie Militaire, 1899, p. 185.
[3] THE LANCET, June 23rd, 1883, p. 1067.
[4] H. W. Jacob: Brit. Med. Jour., June 23rd, 1900, p. 1532.
[5] THE LANCET, August 10th, 1889, p. 265.

THE EMPLOYMENT OF A SPECIAL PATHOLOGIST BY A CORONER.

THE report of the district auditor (Mr. T. Barclay Cockerton) on the accounts of the London County Council for the year 1904–05 was circulated on Monday. The report says: "In the course of the audit the British Medical Association, represented by their counsel, together with other

ratepayers, appeared before me to object to the allowance of certain disbursements by Mr. John Troutbeck, one of the coroners of the county. I carefully considered the objections and on the 11th of January gave my decision that all the payments objected to were legal and that the Council were justified in charging them in these accounts. I have been asked to give a statement of my reasons for allowing the payments objected to, which reasons I have duly entered in the book of account, according to the statutory requirements. In giving my decision in favour of the Council I expressed my sympathy with the members of the medical profession who were affected by the mode of procedure adopted by Mr. Troutbeck. At the same time I desire to take this opportunity of saying that I am convinced that both the public control committee of the Council and the coroner have been solely influenced by a desire to ascertain effectually the cause of death in cases where inquests are held and to act generally in the public interest. I may say, however, that in my opinion the Coroners Act of 1887, on which the objectors relied, never contemplated the employment of a special pathologist in the manner adopted by Mr. Troutbeck. I would therefore strongly urge the passing of an amending Act in order to remove some of the difficulties in connexion with this matter and I understand that the Council have for the past 11 years been endeavouring to obtain an amendment of the law in this direction." The finance committee of the London County Council, to whom the auditor's report was referred, states that the matter in question is receiving consideration

PROMOTION OF AGRICULTURAL RESEARCH.

AN interesting letter written by Professor H. E. Armstrong, F.R.S., has recently been published in the *Times* on this subject, from which it would appear that there is a limit to the useful application of artificial manures or, to use a better term, fertilisers. We can quite believe it, and that these essential aids to agriculture are misused has long been our opinion. It should be remembered that a soil can be just as easily made sick of a special manure as of a special crop. In other words, we consider that the old plan of rotations should not be overlooked in dealing with the cultivation of experimental plots and that continually to grow the same crop year after year, no matter how careful the manuring, is flagrantly to violate the laws of nature and to court a breakdown. There should also be more analyses of the soil; the various so-called non-essential ingredients may be wanting and may suddenly assume vital importance. One reason why manures sometimes fail in the hands of the ordinary farmer is that they are applied with most callous indifference to the state and the requirements of the soil. The golden rule is to supply the deficiency. The ordinary farmer should first see if the soil is properly limed; the simple test—effervescence with hydrochloric acid—as suggested by Dr. B. Dyer, who has done so much for scientific agriculture, should be tried. Superphosphate is acid and should not be applied to an acid soil. Hundreds of pounds are spent on improvements on farms, yet how few farmers can tell the reaction of their soil and its simple analysis. Manure is dumped where it can do nothing but outrage nature, and of all dumping the dumping of artificial manure is the worst. It is desirable, we think, that manufacturers should state the reaction to, say, methyl orange clearly in their invoices. This omission of stating the acidity has been much against them, as it has led to improper use of fertilisers. To receive an acid manure properly the soil must be alkaline; this is the keynote to successful application. The invention of the late Sir John Lawes was of the most valuable kind to agriculture. The Government should surely take over, amplify, and extend his experiments, which thus strengthened would confer fresh benefits not only on England but on the whole human race.

THE FACTORY GIRLS' COUNTRY HOLIDAY FUND.

WE have received an appeal on behalf of this fund signed by, amongst others, the Duke of Norfolk, the Bishop of Southwark, the Bishop of Stepney, Dr. Adler the Chief Rabbi, Canon Scott Holland, and the Rev. Dr. R. F. Horton. These names alone are sufficient to show the non-sectarian nature of the fund while we have on many occasions pointed out the wisdom of providing for poor factory girls a holiday in the country. From whatever standpoint we may view this fund, be it that of charity, public health, or the future well-being of the race, there can be but one conclusion—namely, that it is well deserving of support. Already 5000 applications have been received from work-girls or those representing them and 1500 of these have been dealt with. The organisers of the fund as far as possible require the applicants to help themselves and they do so by saving up their pence week by week. In this way they provide on an average about a quarter of the sum required; last year their contributions amounted to £1200. The committee points out that these girls and women work for long hours day after day, live in small and crowded tenements, and earn for the most part from 4*s.* to 12*s.* a week. The holiday is looked forward to by them for months in advance; it is looked back upon and talked about for months afterwards. It often happens that a girl who has herself enjoyed the benefit of a holiday in former years in her anxiety to get a holiday for a sister or a friend is prepared to sacrifice her own, for, as her people say, she comes back looking and feeling quite a different being, built up, and ready to resume cheerfully her work and troubles until holiday time comes round once more. The committee has received 1000 more applications than usual and it is reluctantly compelled to refuse fresh ones until those already sent in have been dealt with. Subscriptions should be sent to the honorary secretary, St. Peter's Rectory, Saffron-hill, London, E.C.

THE ADMISSION OF CASES OF TYPHOID FEVER INTO GENERAL HOSPITALS.

FROM time to time the question of the admission of cases of typhoid fever into the wards of general hospitals comes up for discussion. The tendency has been to treat cases of specific infectious disease in isolation hospitals and many cases of typhoid fever have been transferred to such institutions for treatment. In most, if not all, of the large general hospitals in London, however, cases of that disease are admitted, sometimes into special wards but more frequently into the general wards. Since the infective agent causing the disease is known and the modes of infection are now generally recognised, there can be little doubt that given satisfactory sanitary arrangements and skilled nursing there is no danger of the spread of the disease by such admissions and from many points of view it would be a matter for regret if cases of typhoid fever were excluded from general hospitals. It is eminently desirable that both medical practitioners and nurses should be familiar with the disease, its treatment, and the prophylactic measures necessary to prevent its spread, and for this purpose a closer association with actual cases is necessary than is likely to be obtained by the ordinary course of instruction at special hospitals.

THE Department of Public Health of Queensland states, in a bulletin dated June 16th for the week ending that day, that a mild case of bubonic plague occurred on June 9th. The patient was a male employed as a porter at Roma-street

railway-station, Brisbane, and at the date of the bulletin was convalescent. As regards Hong-Kong, a telegram from the Governor received at the Colonial Office on July 23rd states that for the week ending July 21st there were 7 cases of plague and 5 deaths from the disease.

THE death is announced, at the age of 69 years, of our eminent French *confrère*, Dr. Brouardel, who has for many years been professor of legal medicine at the University of Paris. Dr. Brouardel was also an authority upon practical hygiene and a prolific medical author. We hope to give some details of his life and work in an early issue.

THE annual dinner of the old students of St. Thomas's Hospital will take place on Tuesday, Oct. 2nd, at the Hotel Cecil, London, at 7 for 7.30 P.M. Dr. Arthur Newsholme, medical officer of health of Brighton, will be in the chair.

THE death occurred on Friday last of Mr. E. Noble Smith, senior surgeon to the City Orthopædic Hospital and author of a well-known work upon orthopædic surgery.

Mr. Charles Alfred Ballance, M.B., M.S. Lond., F.R.C.S. Eng., has been appointed a member of the Royal Victorian Order of the Fourth Class.

ROYAL COLLEGE OF SURGEONS OF ENGLAND.

NEW HISTORICAL SUMMARY.

THE recently prepared Historical Summary of the Royal College of Surgeons is of special interest as being the first account of the corporate life of the College. It is worthy of note that the College centenary in 1900 led many to think that the College of Surgeons as an institution was only 100 years old, whereas the corporate lineage of the College could be traced back for nearly six centuries. The summary, of which the following is an extract, has been prepared by the ex-President, Mr. John Tweedy, F.R.C.S., and Mr. S. Forrest Cowell, the secretary.

The early history of the Royal College of Surgeons of England is the history of two companies which, existing at first as separate fraternities or guilds, were for a time united into one body corporate, and finally became resolved again into two distinct corporations. One of these, the Barbers' Company of London, is first definitely mentioned in the records preserved at the Guildhall in the year 1308, when Richard le Barber was presented and sworn before the court of aldermen as Master and Supervisor of the Barbers' Guild; and from an ordinance of the City made in the previous year it is evident that the barbers of London were at that time engaged in the practice of at least some branches of surgery. The other company, known as the Fellowship or Guild of Surgeons, is mentioned in the City records in the year 1369.

Between these two bodies there was for many years a keen rivalry and jealousy. Each tried by turns to attain supremacy of authority and jurisdiction in matters relating to the practice of surgery. In the year 1376 the barbers made a complaint to the mayor and aldermen against unskilled practitioners in surgery, and obtained an ordinance providing that two masters should be appointed annually to direct and rule the craft, to inspect instruments, and to see that none should be admitted to the franchise of the City except after attestation of their skill by good examination. 14 years later, however, four masters of the surgeons' guild were sworn before the court of aldermen and they were invested with the power of scrutiny among persons practising surgery and with authority to present defaults. But in the year 1410 the barbers obtained from the court of aldermen confirmation of the privileges granted to them in 1376 with the addition that they should be enjoyed "without the scrutiny of any person or persons of any other craft or trade under any name whatsoever other than the craft or trade of the said Barbers."

The Barbers' Company was by this time assuming a two-fold character, for it consisted of two classes of members—those who were barbers simply or practised only the minor branches of surgery, such as blood-letting and tooth-drawing, and those who exercised the faculty of surgery. In the year 1415 the mayor and aldermen required the company to furnish them with a list of all the latter class of members, from which they selected two as masters of those practising surgery, leaving to the company itself the election of the masters of the barbers. Meanwhile the Guild of Surgeons sought an alliance with the physicians. About the year 1423 they obtained an ordinance from the court of aldermen having for its object an association or commonalty of physicians and surgeons. Fortified by the support of the physicians the surgeons once more challenged the surgical privileges of the barbers but these were again confirmed by the mayor and aldermen in 1424. The scheme for a combination of physicians and surgeons fell through but the surgeons continued a separate body with ordinances for the government of their Society.

Freed from opposition the Barbers' Company continued to grow in importance and in the year 1462 the right of its members to practise surgery was definitely established by Letters Patent granted by Edward IV. in the first year of his reign. This charter, from which the Royal College of Surgeons of England, as recited in the charter of 1800, dates its constitutional history as a body corporate, was granted to the freemen of the mystery of barbers of the City of London practising surgery. They were made one body and perpetual community with a common seal and with power to hold lands and to make by-laws.

In the year 1493 the Guild of Surgeons, which had continued as a separate body, entered into an alliance or "composition" with the Barbers' Company, by which the two companies agreed each to appoint two wardens, the four so appointed to act together in all matters relating to surgery and to the examination and government of its practitioners. The charter granted by Edward IV. to the Barbers' Company was confirmed by Henry VII. and also by Henry VIII., but in 1511 an Act (3 Henry VIII., cap. 11) was passed, constituting a further licensing authority by enacting that no person should practise as a physician or surgeon in London, or within seven miles of the same, unless first examined and approved by the Bishop of London, or the Dean of St. Paul's, with the assistance of four physicians or surgeons. In the year 1540 the two companies were formally united by Act of Parliament. The Act (32 Henry VIII., cap. 42), after reciting that there were two distinct companies of surgeons in London, one called the Barbers of London and the other the Surgeons of London, enacted that the two companies should from thenceforth be united and made one body corporate to be called by the name of the Masters or Governors of the Mystery of the Commonalty of the Barbers and Surgeons of London. The united company was to enjoy all the rights and privileges at any time granted to the two separate companies. Four masters, two to be surgeons and two to be barbers, were to be appointed annually; barbers were forbidden to perform any surgical operations except the drawing of teeth and surgeons were not to exercise the craft of barbery and shaving. Provision was also made for the study of anatomy by giving the company the right to claim four bodies annually of persons executed for felony. Thomas Vicary, Serjeant-Surgeon to Henry VIII. and afterwards to Mary and to Elizabeth, was elected the first master. The united company shared the possession of Barbers' Hall, which is known to have occupied its present site in Monkwell-street since 1490, and was probably there even before that. The hall, subsequently added to by Inigo Jones in 1636, is still standing, having escaped destruction in the Great Fire of London.

The union thus effected was destined to last for more than 200 years. At first, however, the privileges conferred on the surgeons of the company appear to have excited opposition, for in the thirty-fourth and thirty-fifth years of Henry VIII. an Act was passed allowing unlicensed persons to treat outward sores and swellings with herbs and ointments.

During the reign of Queen Mary, in the year 1555, regulations were drawn up relating to the examination of persons for the company's licence to practise. These regulations provided for the appointment of 13 examiners, including the master and two governors. This is the origin of the present court of examiners of the Royal College of Surgeons.

In the year 1605 the company obtained a charter from James I. providing that the governing body of the company should consist of four masters, two of whom were to be

surgeons, and 26 assistants. The company was given power to examine barbers and surgeons and to prohibit ignorant persons, or such as wilfully refused to be examined, from practising. In the year 1629 Charles I. granted a further charter to the company, providing that ten freemen of the company should be elected and constituted examiners of surgeons of London. No one was to practise surgery in London, or within seven miles of it, except members of the College of Physicians, unless examined and approved by the examiners of the company, and every person so approved might practise surgery anywhere in England. Apprentices were to serve for not less than seven years, to be sound in body and limbs, and to read and understand Latin. The duty was also assigned to the court of examiners of examining surgeons and surgeons' assistants for the Royal Navy and Merchant Service and of inspecting their instruments and chests of medicines.

For many years the union between the two companies appears to have worked smoothly but as early as 1684 there were signs that the surgeons were beginning to find their association with the barbers irksome and inconvenient. In that year a petition for the dissolution of the united company was presented to the King but the agitation died out, and it was not until many years later that further steps were taken in the matter. The dissatisfaction, however, continued. From the year 1540 the practice of surgery had been entirely separated from that of barbery, and much progress had been made in surgical skill and knowledge. Under the united company several of the surgeons had attained great eminence in their profession and among these may be mentioned Richard Ferris, Thomas Gale, the two Clowes, Wiseman, Amyand, Cheselden, Sir Cæsar Hawkins, and Percivall Pott.

In the year 1745 an Act of Parliament was passed dissolving the union and establishing two separate companies. The barbers were allowed to retain the whole of the corporate property, real and personal, with the exception of the Arris bequest and Gale's annuity for anatomy lectures founded in 1646. These trusts the Act vested in the Company of Surgeons and they are now administered by the Royal College of Surgeons. This Act of the 18th George II. dissolving the union of the barbers and the surgeons incorporated the surgeons under the name of the Master, Governors, and Commonalty of the Art and Science of Surgeons of London. John Ranby, serjeant-surgeon to George II. (whom he accompanied to the battle of Dettingen in 1743), became the first master of the company and upon taking his seat he presented a handsome silver cup, which is still in the possession of the College. The surgeons now had to find a new home and after holding their first meetings at Stationers' Hall, eventually secured premises in the Old Bailey and there built Surgeons' Hall, entering into occupation in 1751.

In 1796 the company became involved in difficulties in consequence of a provision in the act of incorporation which had unfortunately been framed without due regard to possible eventualities. This provision required that the master and governors, or any two of them, with nine or more members of the court of assistants, should constitute a court for the despatch of business. About this time a meeting was held at which the master, Mr. Gunning, presided, but at which no governor was present. Consequently it was impossible to obtain a properly constituted quorum. Nevertheless the court conducted its ordinary business, and among other matters elected Henry Cline to the court of assistants. In spite of this technical defect in their constitution the court of assistants continued to transact the business of the company. They disposed of their property in the Old Bailey and acquired a freehold site in Lincoln's Inn Fields, upon which part of the present building of the Royal College of Surgeons of England now stands. It became, however, necessary to find some means of removing the legal difficulties which had arisen and for this purpose and also with the object of acquiring additional powers and authority a Bill was introduced into Parliament. The Bill passed through the Commons but was thrown out in the House of Lords and after further deliberation it was determined to abandon the Bill and to petition for a charter from the Crown

Meanwhile Parliament intrusted to the care of the company the Hunterian collection purchased for the nation at a cost of £15,000. The collection was delivered to the company under an order of the Treasury in 1799 and in 1800 the company was re-incorporated and constituted by the name of the Royal College of Surgeons in London, by charter granted by George III. In the year 1806 Parliament voted a sum of £15,000 and subsequently a further sum of £12,500 in aid of the erection of a building for the display of the Hunterian collection. A contribution of £21,000 was at the same time made from the funds of the College and the museum was opened to visitors in 1813.

The charter of the 40th George III. definitely severed the connexion of the College with the corporation of the City of London. Members of the College were not entitled to any franchise belonging to the freemen of the City, but all other privileges and possessions acquired under former Acts and charters, and not altered by the charter then granted, were continued and ratified. A further charter, granted by George IV. in 1822, changed the titles master and governors to president and vice-presidents, and provided that the court of assistants should in future be styled the council of the College.

No change was, however, made in the constitution of the College until the year 1843, when a new charter (7th Victoria) was obtained which changed the name of the College to the Royal College of Surgeons of England, and instituted a new class of Members who were to be called Fellows, from and by whom the council was to be elected. The number of the council was increased to 24 and, while the existing members of the council were allowed to continue in office for life, provision was made that three members should retire annually so that, when no more life-members were left, it would not be possible for a member to retain his seat for a longer period than eight years without re-election. A great change was also effected by this charter in the constitution of the court of examiners. They were no longer to be necessarily selected from the council but any Fellow, whether on the council or not, was made eligible. The examiners then in office were to continue for life, but all future examiners were to hold office only during the pleasure of the council. The Serjeant-Surgeons and Surgeon-General to the Forces were no longer to have any preference of being admitted examiners, and the President and Vice-Presidents were not to be chosen exclusively from the examiners but from all the members of the council indifferently, whether examiners of the College or not.

In the year 1859 the licence in dental surgery was instituted under the charter of the 23rd Victoria, which empowered the council to appoint a board of examiners for testing the fitness of persons to practise as dentists.

In pursuance of the provisions of an Act of Parliament passed in the year 1875, the College subsequently entered into an agreement with the Royal College of Physicians of London, establishing a Conjoint Examining Board and requiring that all candidates for the Licence of the Royal College of Physicians and the Membership of the Royal College of Surgeons, commencing professional study after Oct. 1st, 1884, should pass the examinations of the Board before becoming entitled to their diplomas. Thus was constituted the present examining board of the two Colleges.

The last charter obtained by the College in 1899, the sixty-third of Queen Victoria's reign, enables the council to elect persons whom it shall deem to be sufficiently distinguished for the purpose to be honorary Fellows of the College. These honorary Fellows, the number of whom must not exceed 50 at any time, are not eligible for the council or for the court of examiners, nor are they entitled to vote at elections to the council. Their status is purely honorary and does not confer the right to practise surgery. At the head of the list of distinguished names the College has the honour to place that of King Edward VII. His Majesty when Prince of Wales became the first honorary Fellow of the College and, after ascending the throne, signified his pleasure to retain the title.

THE ROYAL SANITARY INSTITUTE.

(Continued from p. 181.)

HEALTH EXHIBITION.

THE annual exhibition of the Royal Sanitary Institute was opened at Bristol on July 9th by the Lord Mayor who was accompanied by the Lady Mayoress. The preliminary list of awards, comprising five silver medals and

36 bronze medals, was announced by Mr. H. D. Searles-Wood, chairman of the committee of judges, which included Dr. Philip Boobbyer, Colonel J. Lane Notter, R.A.M.C. (retired), Dr. Louis C. Parkes, and Dr. George Reid.

The exhibits were divided into sections dealing with all branches of sanitation. In Division A (Science in Relation to Hygiene) Mr. George Blissett, 71, Brookwood-road, Southfields, London, S.W., exhibited a wide range of optical instruments and appliances, including a collection of ancient spectacles and spectacles for ordinary and special purposes. Mr. Joseph W. Lovibond, The Laboratories, Salisbury, showed apparatus for establishing the colours of healthy and abnormal bloods and for showing their deviation by a system of curves. An apparatus for measuring the colour of potable and contaminated water and effluents also attracted attention. In Division B (Hygiene of Special Classes, Trades, and Professions) Messrs. Wilson and Stockall, Bury, Lancashire, gave prominence to ambulance vehicles, including a patent brougham ambulance fitted with a stretcher and two seats, one for a sitting patient, the other for an attendant, and specially designed for easy disinfection. They also showed a motor ambulance, mounted on a 12–14 h.p. chassis, containing two stretchers, one above the other, and two seats for attendants. The compactness of the design enables the vehicle to be used in the narrow streets of large towns. Messrs. Pocock Brothers, 235, Southwark Bridge-road, London, S.E., gained a silver medal for a completely equipped indiarubber padded room, of full size, fitted with a drainage gully and all known modern appliances. A large number of excellent coloured charts, designed for the teaching of young children, by Messrs. E. J. Arnold and Son, Limited, publishers, Butterley-street, Hunslet-lane, Leeds, gained considerable notice. For example, a set of eight charts on physiology dealt with the elementary principles of physiology, hygiene, and first aid; a large chart gave practical hints on fresh air and light, food and drink, warmth and clothing, bathing, rest and exercise, and various household matters; while another chart indicated the best and safest things to do in an emergency in cases of simple injuries and ailments. The exhibit of Messrs. Monat and Company, 3, St. Paul-street, Portland-square, Bristol, consisted of a safety mail-cart for children, so designed that when the attendant's hands are removed from the shafts a brake is automatically set in action. The cart was fitted in addition with a novel safety belt for securing a child while allowing it sufficient freedom of movement.

In Division C (Construction and Sanitary Apparatus) reference may be made to the sewage distributors of Mr. George Percival Milnes, 6, Rowcroft, Stroud, Gloucestershire; Messrs. H. Birch, Kilton, and Co., 20, Cooper-street, Manchester; and Messrs. W. Harriman and Co., Limited, 1, Charlotte-square, Newcastle-on-Tyne. Improved hospital lavatories were shown by Mr. John Jones, Carlyle Works, Chelsea, S.W.; Messrs. Doulton and Co., Albert Embankment, London, S.E.; and Messrs. Shanks and Co., Limited, Barrhead, Glasgow. Messrs. George Howson and Sons, Limited, Hanley, Staffs, included types of lavatories suitable for use in operating theatres, with a lever apparatus to operate the taps and a knee lever to operate the waste. Other forms of operating theatre lavatories were shown by Messrs. Doulton and Co., together with a fireclay mortuary slab and an oblong sink for operating rooms, fitted with an aseptic filter and irrigators, and a mixing valve for hot and cold water over the sink, with spray and jet nozzles. Messrs. Pountney and Co., Limited, Fishponds, Bristol, made a feature of semi-porcelain lavatory basins that will not craze, a point of importance in hospital fittings. Much interest was taken in the appliances for the prevention of smoke, of which the exhibit of the British Fuel Economiser and Smoke Preventer Co., 9, Bedford-row, London, W.C., was prominent. Ozonair, Limited, 27, Chancery-lane, London, W.C., showed in operation types of apparatus for the commercial production of ozone which is claimed to be free from oxides of nitrogen. The B.V. type is intended for purifying the atmosphere in hospitals and other buildings and the P.M. type is designed for medical use in the treatment of diseases of the skin and other complaints. Other types are made for the bleaching of foods—e.g., treacle, sugar, and flour, also fabrics, and for the maturing of tobacco and whisky. The makers of the apparatus claim that it is possible in an hour to mature whisky by means of ozone to the same extent as is usually attained by years of storage. One of the most novel exhibits was a window fitted with a collapsible ventilator for producing efficient ventilation without draught exhibited by the Combination Collapsible Ventilator Co., 85, Duke-street, Liverpool. Among the numerous stoves on view was the D. O. Boyd's "Hygiastic" Warm Air Ventilating Grate, made by Messrs. Hendry and Pattisson, Lavender-hill, London, S.W.; it was tested on behalf of the Smoke Abatement Society and lettered A in the report on Test of Certain Open Domestic Grates published in THE LANCET of May 19th, p. 1413. Mr. E. G. Wright, 44, Woodbridge-road, Guildford, Surrey, showed a hot-air system for bringing warm air into rooms in winter and cold air in summer without producing draughts.

In Division D (Personal and Domestic Hygiene) Messrs. J. S. Fry and Sons, Limited, Union-street, Bristol, exhibited their malted cocoa, a combination of Fry's pure cocoa extract with Allen and Hanbury's extract of malt. Messrs. Cadbury Bros., Limited, Bourneville, near Birmingham, exhibited their well-known cocoas.

QUACKS AND ABORTIFACIENTS.

AT the recent Nottingham Assizes, before Mr. Justice Walton and a jury, the case of Rex *v.* Seagrave (*alias* Wardle), where the accused was charged with the sale of diachylon as an abortifacient, resulted in a conviction of the prisoner in circumstances that will be of interest to our readers.

The attention of the medical profession in and around Nottingham has been directed for some time to the increasing use of diachylon as an abortifacient among the working classes. Since the passing of the Midwives Act, moreover, inquiries have been systematically made in the city of Nottingham with regard to cases of still-birth and abortion notified to the local authority under the Act, and in many instances there has been a strong suspicion that lead pills had been taken for the purpose of procuring abortion. Special attention was given to Bulwell, an outlying part of Nottingham, as the reports received from that place showed that the practice was very common there. Cases of lead poisoning, exclusively confined to women of child-bearing age, were stated to be of continual occurrence in this suburb. The pills used in Bulwell were commonly spoken of as "Mrs. Seagrave's pills" and this Mrs. Seagrave (*alias* Wardle) was said to do quite an extensive trade in them, selling them to both married and unmarried women. About ten recent cases were cited in which there was a definite history of lead poisoning and abortion and the corporation authorities considered that an attempt should be made to obtain some of the pills for analysis, so that if possible legal proceedings might be taken against Mrs. Wardle. A box of pills was procured by an agent of the health department and these were found on analysis to consist of diachylon (from 50 to 70 per cent.) and aloes, with an outer coating of boric acid. They were roughly made and varied in size from one and a half grains to five grains. The case was now handed over to the police who arrested Mrs. Wardle and searched her house, where a large quantity of pills similar in composition to those which had been analysed were found and also the implements and materials used in making them. The prisoner was brought before the magistrate and three witnesses were produced who had bought pills from her and had been seriously ill after taking them. Medical evidence was adduced to show that in each case these women had aborted and had suffered from lead poisoning. On the evidence given the magistrates committed the prisoner to the assizes, the defence being reserved.

The case was heard at the Nottingham Assizes on July 17th and 18th, the prisoner being indicted on four charges of supplying pills "containing a certain poison called lead, with intent to procure abortion." As before, the prosecution called witnesses to prove the purchase of the pills from Mrs. Wardle and the ill effects produced by taking them. The medical men who had attended these witnesses again gave evidence that lead poisoning and abortion had occurred in each case. The city analyst described the result of his analysis of the pills and the medical officer of health corroborated this and also spoke at length as to the serious results that would follow the taking of such pills for any considerable period. The women who had purchased pills all stated that Mrs. Wardle had instructed them to take a dose of Epsom

salts, fasting, in the morning, followed by four of the pills and four pills again at night.

For the defence it was stated that Mrs. Wardle made and sold the pills, but had no idea that they were harmful and that she had not sold them for the purpose of procuring abortion but only as "female pills" to be taken in cases of suppressed or irregular menstruation. In the witness-box Mrs. Wardle said that she had no knowledge of the specific action of diachylon or that it contained poison and that she merely used it to make the pills hold together. She denied that she had knowingly sold the pills to pregnant women. Several witnesses, both male and female, came forward and stated that they had taken the pills and derived benefit from them for such ailments as bad backs, internal pains, and anæmia. To rebut the last statement the medical officer of health, with the consent of the court, was again called, and stated that anæmia was one of the earliest and most constant symptoms of lead poisoning, and it was inconceivable that when lead was given to an already anæmic patient it should fail to aggravate the anæmia.

In his summing up the learned judge expressed his opinion that there was no doubt that Mrs. Wardle had sold the pills, and that they were noxious things, but that the question for the jury to decide was whether they were sold with intent to procure abortion. He spoke strongly as to the growing prevalence of the trade in abortifacients and said that in the interests of public justice it should be severely dealt with. His lordship also remarked that it was very difficult to reconcile Mrs. Wardle's statement that she was not aware of the harmful effects of diachylon with the fact that she had advised her clients in every instance to take doses of Epsom salts. As Epsom salts were an acknowledged eliminative for lead, it seemed very strange that they should have been prescribed, unless it was known to the prisoner that diachylon contained lead.

The jury found the prisoner guilty but recommended her to mercy, and she was sentenced to 18 months' hard labour. At the same time the learned judge stated that he wished it clearly to be understood that the law said that an offence of this kind was a felony for which the maximum penalty was penal servitude for life.

CENTRAL MIDWIVES BOARD.

A SPECIAL meeting of the Central Midwives Board, under the provisions of Rule 4 of the rules of procedure, was held at Caxton House, Westminster, on July 12th, Dr. F. H. CHAMPNEYS being in the chair.

The following charges amongst others were alleged against a certified midwife, Ellen Buck:—

1. That having been duly suspended from practice as a midwife by a local supervising authority she nevertheless continued to practise. 2. That being in attendance as a midwife at a confinement she was guilty of negligence.

The Board directed the name of this midwife to be removed from the roll.

The following charges amongst others were alleged against a certified midwife, Elizabeth Campbell:—

1. That she did not wear a dress of washable material. 2. That she did not carry or possess the appliances or antiseptics required by Rule E, 2. 3. That she did not keep a register of cases as required by Rule E, 19 (*a*). 4. That on the occurrence of a stillbirth in her practice, no registered medical practitioner being in attendance, she neglected to notify the same to the local supervising authority.

The Board directed the name of this midwife to be removed from the roll.

The following charges amongst others were alleged against a certified midwife, Ita Feldmann:—

1. That having been engaged as a midwife to attend in an approaching confinement she employed as her substitute an uncertified person, not being a legally qualified medical practitioner. 2. That while in attendance as a midwife at a confinement, the patient being ill, she did not decline to attend alone or advise that a registered medical practitioner be sent for as required by Rule E, 17, but fetched an unqualified person to attend the patient.

The Board directed the name of this midwife to be removed from the roll.

The following charges were alleged against a certified midwife, Susan Hasler:—

1. That she was not scrupulously clean in every way as required by Rule E, 1. 2. That she did not carry or possess the appliances or antiseptics required by Rule E, 2. 3. That she did not keep a register of cases as required by Rule E, 19 (*a*).

The Board directed the name of this midwife to be removed from the roll.

The following charges amongst others were alleged against a certified midwife, Alice Hilton:—

1. That being in attendance as a midwife at a confinement and subsequently during the lying-in period, on the occurrence of puerperal fever in the patient she neglected to decline to attend alone or to advise that a registered medical practitioner be sent for, as required by Rule E, 17 (*c*). 2. That having been warned not to attend other cases she nevertheless continued to attend a case without having disinfected herself, her clothing, or her appliances, as required by Rule E, 5.

The Board directed the name of this midwife to be removed from the roll.

The following charges were alleged against a certified midwife, Nanny Lord:—

1. That she did not wear a dress of washable material when in attendance upon a confinement as required by Rule E, 1, and that she persistently refused to do so. 2. That when called to a confinement she did not take with her the appliances or antiseptics required by Rule E, 2, and that she persistently refused to do so.

The Board directed the name of this midwife to be removed from the roll.

The following charges were alleged against a certified midwife, Mary Ann McGrath:—

1. That she was not scrupulously clean in every way and did not wear a dress of washable material as required by Rule E, 1. 2. That she did not carry or possess the appliances or antiseptics required by Rule E, 2. 3. That she did not keep a register of cases as required by Rule E, 19 (*a*).

The Board directed the name of this midwife to be removed from the roll.

The following charges amongst others were alleged against a certified midwife, Margaret Ellen Manns:—

1. That being in attendance as a midwife at a confinement and subsequently during the lying-in period she was guilty of negligence in the following respects: On the occurrence of foul-smelling discharges, rigor, and a rise of temperature above 100·4° F., with quickening of the pulse for more than 24 hours, she did not decline to attend alone and advise that a registered medical practitioner be sent for as required by Rule E, 17 (*c*). 2. That the patient having died of puerperal fever she proceeded on the same day to attend another confinement and then examined the patient without having disinfected herself, her clothing, or her appliances as required by Rule E, 5. 3. That subsequently on the same day she laid out a dead body in contravention of Rule E, 15. 4. That subsequently on the same day she returned to continue her attendance at the confinement. 5. That while in attendance as aforesaid she was guilty of negligence in the following respect: on the retention of the placenta for more than one hour after the birth of the child she did not decline to attend alone and advise that a registered medical practitioner be sent for as required by Rule E, 17 (*b*).

The Board directed the name of this midwife to be removed from the roll.

The following charges amongst others were alleged against a certified midwife, Sarah Patrick:—

That being in attendance as a midwife at a confinement and subsequently during the lying-in period she was guilty of negligence and misconduct in the following respects: (*a*) she neglected to use any antiseptics or disinfectants; (*b*) she neglected to wash the patient; (*c*) after the day of the confinement she visited the patient three times only—viz., on the third, seventh, and ninth days; and (*d*) on the occasion of her visit on the third day she was drunk and incapable of performing her duties as a midwife.

The Board directed the name of this midwife to be removed from the roll.

The following charges were alleged against a certified midwife, Hannah Porter:—

1. That on March 1st, 1906, she laid out the body of a dead woman who had died from blood poisoning (Rule E, 15). 2. That on March 2nd, 1906, without having adequately disinfected herself or her clothing, she acted as a midwife at the confinement of a woman. 3. That on March 9th, 1906, and following days, the progress of the patient not being satisfactory, her face being swollen and symptoms of fever having set in, she neglected to decline to attend alone and to advise that a registered medical practitioner be sent for (Rule E, 17).

The Board directed the name of this midwife to be removed from the roll.

The following charges amongst others were alleged against a certified midwife, Caroline Spiers:—

1. That when called to a confinement she did not take with her the appliances or antiseptics required by Rule E, 2, and that she declined to undertake to provide herself with them. 2. That she did not previously disinfect her hands and forearms on each occasion of touching the genital organs or their neighbourhood as required by Rule E, 3. 3. That before making the first internal examination she neglected to wash the patient's external parts with soap and water and to swab them with an antiseptic solution as required by Rule E, 7.

The Board directed the name of this midwife to be removed from the roll.

The following charge amongst others was alleged against a certified midwife, Sarah Uren:—

That having been suspended by the local supervising authority in

order to prevent the spread of infection she nevertheless disregarded the notice and attended a confinement as a midwife.

The Board directed the name of this midwife to be removed from the roll.

THE AUSTRIAN EXHIBITION AT EARL'S COURT.

SOME years have elapsed since there has been so serious an exhibition at Earl's Court. There was a danger that these annual exhibitions would degenerate into mere out-of-door entertainments, where bands, the Big Wheel, the water-chutes, the gardens, and various side shows would constitute the chief attractions. This year, however, we have, for the first time, an Austrian exhibition and both public bodies and private enterprise of that country have really endeavoured worthily to be represented. As a result the exhibition constitutes quite an object lesson in regard to the resources of the empire. The heavier industries—coal mining, ironworks, leather dressing, cotton and wool, &c.—are, it is true, scarcely represented. It is mainly the Austria of the tourist that we see; and this includes those who travel not merely for pleasure but for health. There is, indeed, quite an important section devoted to the great Austrian balneological stations. This will be found on the right-hand side of the Royal Galleries if entered from the Brompton or the Tyrolese Village side, close to the colonnade that surrounds the oval known as the Royal Galleries, in a quiet inner compartment. Here these exhibits can be studied at ease. At one end there is an oil painting of Abbazia. It shows the beautiful position occupied by this celebrated resort of the Adriatic Riviera. Close at hand, on a large stand, an extensive display of bottles and pamphlets are intended to convey some idea of the benefits to be derived from the arsenious iron baths of Levico-Vetriolo. These are valleys 1600 feet and 3000 feet respectively above the level of the sea and situated near Trent in the South Tyrol. The railway journey from London takes 38 hours and the spring and autumn are the favourite seasons. The waters are rich in proto-sulphate of iron and of arsenious acid, and there is also a summer bathing establishment, for the waters are used externally and internally.

The advantage, and it is a very great advantage, of this section of the exhibition is that every detail of needful information can be obtained concerning the various health resorts. For instance, in regard to most resorts we can ascertain not only the composition of the waters and the diseases for which they are employed but the charges made for the baths, the different forms of treatment, and for the Kurtax, and what sports, concerts, and entertainments are provided in return for this tax. Here, likewise, a large number of photographs can be seen. There is notably a very fine photograph of Meran, while albums provide views of the details of the baths and their organisation. There are statistics also, and thus we learn, for instance, that 30,000 visitors annually frequent the sulphur baths of Baden, near Vienna. But in autumn this method of treatment may be varied with "the grape cure," which agreeable *régime* doubtless attracts many persons. Then the hotels are organised so that the food of the residents may be in accordance with the directions laid down by the medical attendants.

Close at hand are the exhibits of the Teplitz-Schönau warm alkaline-saline spas situated above the Adriatic in North-West Bohemia. Here also are mud baths and the chemical composition of the mud is given. There are several pages of printed matter setting forth the rules and regulations in regard to the hiring of lodgings or apartments. This is very useful in preventing misunderstandings and possible disputes. Franzensbad has a large stall and it boasts of "the best moor baths in the world." Large glass vases contain specimens of this mud. Indeed, there is quite an extensive display of rival muds and peat in this section. Samples of mud are pressed upon the visitor as if mud was a highly valuable article to be studied and only truly appreciated by the well-educated connoisseur. The corporation of Franzensbad purchased in 1893 and in 1904 the springs, parks, and moor grounds, so that all the means of treatment should be placed under a uniform town administration. The modern methods and apparatus have been introduced but there is no wasteful competition between rival local establishments. An elaborate illustrated volume gives full details concerning the various springs and resources of the place. There are alkaline springs, chalybeate and steel springs, and one of the iron waters also contains lithia. Altogether there are 12 mineral springs and thus a great variety of diseases are treated there and of late many cases of heart disease have derived benefit at this station. Franzensbad is in Bohemia. It stands 1500 feet above the sea level and via Ostend can be reached from London in 22 hours. The exhibit at Earl's Court gives a very thorough indication of the resources of this station. The same may be said in regard to the world-famed resorts of Marienbad and Carlsbad. Every conceivable detail and necessary information can be obtained here. The physician or the patient, instead of writing long explanatory letters to one of these health stations, need only go to Earl's Court. Also there may be some hesitation, more detailed knowledge may be desirable, either in regard to the chemical composition of the waters, the sort of baths given, the style and cost of life, and the resources for exercise or amusement. All this cannot so readily be obtained by correspondence and one station compared with other stations. But at Earl's Court nothing is easier. Ample literature in English with maps and views are supplied gratuitously. Any medical practitioner can also have samples of the waters, or salts, or peat, or mud, for examination here in London. Therefore before recommending a patient to proceed to any one of these stations, his medical adviser has now within easy reach all the necessary information. Certainly this section of the exhibition has been well and thoroughly organised and medical men will do well to profit by this opportunity of securing practical information that cannot fail to be of use.

Other parts of Earl's Court illustrate the attractions of Austria, but especially of the Tyrol, for the general holiday seeker and tourist. Walking expeditions in the Tyrol are very practical and inexpensive. Much beautiful scenery and bracing exercise can be enjoyed. The Bohemian and Dalmatian sections are well calculated to inspire the tourist and the traveller with the desire to visit those romantic mountainous portions of the Austrian Empire.

MEDICINE AND THE LAW.

Action for Alleged Negligence against Medical Men.

THE case of Crier and Wife *v.* Hope and Currie which came last week before the Court of Appeal was an important case as to the liability of medical men. The action was brought by a gentleman and his wife to recover damages in consequence of the latter having contracted scarlet fever while being attended by the defendant, Dr. G. B. Currie, in her confinement, and it was alleged that the medical man was negligent in carrying the infection to her. The questions were, whether due and reasonable care had been taken by Dr. Currie and whether the mischief caused to the wife was due to any want of reasonable care on his part. The summing-up of Mr. Justice A. T. Lawrence in the court below was a most careful one and he told the jury over and over again that Dr. Currie undertook to use due and reasonable care and skill. At the trial a verdict and judgment were entered for the defendants, the jury finding that Dr. Currie had taken the usual precautions. Dr. Currie was defended throughout the case by the London and Counties Medical Protection Society. It was argued for the plaintiffs that the jury meant to find that Dr. Currie, though taking the usual precautions, did something short of taking reasonable precautions, or at all events that there was no finding that he took reasonable precautions. The Master of the Rolls, in the course of his judgment, said: "The case lay in a nutshell, whether it was put upon contract or upon the implied duty of a medical man to his patients. In each case the duty was the same. As to the point of an alleged technical assault, which could at most only result in nominal damages and could, therefore, only affect the costs, it was sufficient to say that the case at the trial was conducted without reference to that point and it was only after verdict that it was raised. That was too late. The verdict and judgment must therefore stand." There have been several actions at different times against medical men for alleged negligence,

but they have not been successful as a rule unless gross negligence was proved. It may perhaps be of some interest to refer to a few. In Lanphier *v.* Phipos (8 Car. & P. 475) it was said that every person who enters into a learned profession undertakes to bring to the exercise of it a reasonable degree of care and skill; he does not, if he is an attorney, undertake at all events to gain the cause; nor does a surgeon undertake that he will perform a cure; nor does the latter undertake to use the highest possible degree of skill, as there may be persons of higher education and greater advantages than himself, but he undertakes to bring a fair, reasonable, and competent degree of skill; and in an action against him by a patient the question for the jury is whether the injury complained of must be referred to the want of a proper degree of skill and care in the defendant or not. In Pimm *v.* Roper (2 F. & F. 783) a surgeon having been employed by a railway company to examine a passenger who had sustained an injury in a collision on their line, and the surgeon having so far as he could see or judge, on the plaintiff's own statement of his injuries, told him that they were so slight that he (the plaintiff) accepted a small sum in compensation, it was held, even assuming that his injuries were greater, there was no ground of action. In an action by a person who had been a patient at a hospital for maltreatment there by two of the surgeons, it appeared that the alleged maltreatment was in the administration of a hot bath which they had ordered, but which it was no part of their ordinary duty personally to direct and to superintend and at the actual administration of which they were not present, it was held in Perionowsky *v.* Freeman (4 F. & F. 977) that the plaintiff was not entitled to expect more than the usual and ordinary degree of care and attention at the hands of the surgeons and that if they were not personally cognisant of the alleged ill-usage they were not liable. To render a medical man liable for negligence or want of due care or skill it is not enough that there has been a less degree of skill than some other medical man might have shown or a less degree of care than even he himself might have bestowed, nor is it enough that he himself acknowledged some degree of want of care; there must have been a want of competent and ordinary care and skill and to such a degree as to have led to a bad result (Rich *v.* Pierpont, 3 F. & F. 35). But every medical practitioner who by a culpable want of attention and care or by the absence of a competent degree of skill and knowledge causes injury to a patient is liable to a civil action for damages unless such injury be the immediate result of intervening negligence on the part of the patient himself or unless such patient has, by his own carelessness, directly conduced to such injury. In Slater *v.* Baker and Stapleton (2 Wils. 359) the plaintiff employed the defendants, the first-named being a surgeon and the second an apothecary, to cure his leg, which had been broken and set, and the callus of the fracture formed. The defendants disunited the callus and Baker fixed on to the plaintiff's leg a heavy steel instrument with teeth to stretch or to lengthen the leg. In a special action upon the case against the defendants the plaintiff recovered £500 damages against them jointly; and in answer to an objection that the action ought to have been trespass *vi et armis* for breaking the plaintiff's leg without his consent the court replied: "It appears from the evidence of the surgeons that it was improper to disunite the callus without consent. This is the usage and law of surgeons. Then it was ignorance and unskilfulness in that very particular to do, contrary to the rule of the profession, what no surgeon ought to have done; and, indeed, it is reasonable that a patient should be told what is about to be done to him, that he may take courage and put himself in such a situation as to enable him to undergo the operation. For anything that appears to the court, this was the first experiment made with this new instrument; and if it was, it was a rash action, and he who acts rashly acts ignorantly; and although the defendants, in general, may be as skilful in their respective professions as any two gentlemen in England, yet the court cannot help saying that, in this particular case, they acted ignorantly and unskilfully, contrary to the known rule and usage of surgeons." A medical man is liable to a civil action for injury resulting to a patient from his negligence or unskilful treatment, although the patient neither employed nor was to pay him. Thus in Longmeid *v.* Holliday (6 Exch. 767), Baron Parke said: "If an apothecary administers improper medicines to his patient, or a surgeon unskilfully treats him, and thereby injures his health, he will be liable to the patient, even where the father or friend of the patient may have been the contracting party with the apothecary or surgeon; for, though no such contract had been made, the apothecary, if he gave improper medicines, or the surgeon, if he took him as a patient and unskilfully treated him, would be liable to an action for a misfeasance"; and in Pappin *v.* Sheppard (5 Bing. N. C. 733), which was an action by a man and his wife against a surgeon for an injury to the wife by reason of the defendant's improper and unskilful treatment, Chief Baron Richards said: "From the necessity of the thing the only person who can properly sustain an action for damages for an injury done to the person of a patient is the patient himself, for damages could not be given on that account to any other person, although the surgeon may have been retained and employed by him to undertake the cure"; and in the same case Baron Garrow said: "In cases of the most brutal inattention and neglect the patients would be precluded frequently from seeking damages by course of law, if it were necessary to enable them to recover that there should have been a previous retainer on their part of the person professing to be able to cure them. In all cases of surgeons retained by any of the public establishments it would happen that the patient would be without redress, for it could hardly be expected that the governors of an infirmary should bring an action against the surgeon employed by them to attend the child of poor parents who may have suffered from his negligence and inattention."

Boric Acid added as a Preservative to Potted Meats.

A firm of provision merchants holding large contracts for the supply of provisions to army canteens was summoned recently at the Brentford police-court under the Sale of Food and Drugs Act for selling certain tinned meats which were not of the nature and quality of the articles demanded. The articles in respect of which the summons was taken out consisted of chicken and tongue, chicken and ham, and ham contained in tins the price of which was 1*d.* each and the adulteration complained of consisted of the addition of boric acid as a preservative in a proportion equivalent to 52 grains of borax per pound. There was also evidence that colouring matter in the form of oxide of iron had been used. After a considerable amount of expert evidence had been given on both sides the bench held unanimously that there must be a conviction on the ground that the article sold was rendered injurious by the addition of boric acid in the proportion proved, pointing out that it had been admitted by a witness called for the defence that the preservative might injure a child or a person not in robust health, although it might have no effect upon a healthy adult. A fine of £5, with 50 guineas costs, was imposed. In this case the evidence of the prosecution was not directed to showing any general or certain danger arising out of the presence of boric acid but was confined to the points that in the case of sound meats preserved by being "tinned" it was quite unnecessary and that its effect might be prejudicial to the consumer according to the amount consumed and other circumstances. It was also pointed out that although it was not suggested that the meat forming the subject matter of the prosecution was unsound, and although boric acid would not act as a deodoriser, the preservative might act so as to arrest incipient decomposition without averting the effects of that which had already taken place and also that the summons was not taken out in respect of potted meat which would be kept after the tin was opened but in respect of small tins costing a penny each which would be consumed at once. The suggestion put to a witness that borax might be used medicinally was met with the natural answer that this would not make it desirable to administer it indiscriminately in food. The evidence called for the defence was to the effect that borax was generally used as a preservative, particularly in the case of ham, which it was suggested was due to the modern demand for hams "mildly" cured and was more particularly called for the purpose of establishing the general want of proof of ill-effects arising from its use. The conclusion to which the case points would seem to be that the use of boric acid as a preservative should be discouraged in every possible manner, not on account of any serious danger necessarily arising in all cases where it is employed, but on account of the difficulty of allowing its use in moderation and of, at the same time, detecting and punishing its abuse when added in excessive quantities and for an illicit object.

Looking Back.

FROM

THE LANCET, *SATURDAY*, July 26th, 1828.

The Coroner's Inquest is, in respect to its object and tendency, one of the most useful institutions in this country; but its utility is greatly limited, and in many instances entirely defeated, by the inefficiency of the individuals who, for the most part, fill the office of Coroner. The fact is, that in almost all the cases which come before the Coroner, the question to be determined is of a medical, and not of a legal character. The statute of the 4th Edward I., which comprehends nearly all the law relating to the office of Coroner, is a short act of Parliament, which any man who runs may read and understand. Any man of ordinary understanding, who has read this statute, and who has served occasionally as juryman, or witnessed a few trials, so as to acquire some general information as to the common rules of evidence, is competent, as far as legal qualifications are concerned, to discharge the duties of the office of Coroner. But the medical qualifications which would enable a Coroner to discharge with efficiency the duties of his office, are of a far higher order, and can hardly be expected to be possessed by any man not a member of the medical profession. Questions constantly arise, in the course of inquisitions before the Coroner, which demand an intimate acquaintance on the part of that officer, with anatomy, pathology, chemistry, and therapeutics. The very *gist* of these inquiries, in all cases of difficulty or doubt, involves a medical question, which can only be adequately determined by medical men. To determine whether the death of the deceased arose from natural or violent causes; to judge whether a particular injury is capable of producing the effects supposed to have resulted from it; to decide whether poison has or has not been taken, and to distinguish between cases in which a poisonous substance may have been administered with a guilty intent, and where it may be presumed to have been given as a therapeutic agent—such are the points on which a Coroner is perpetually called upon to inform and direct a Jury, and on which, without a medical education, it is impossible that he can himself arrive at sound and satisfactory conclusions. PARIS and FONBLANQUE, in their Medical Jurisprudence, feeling the necessity of medical information to a due discharge of the duties of the office of Coroner, recommend the addition of a medical assessor to assist that officer in the holding of Inquests. But this is advising the repair of an old building, when the cheaper and wiser course would be to pull it down, and erect a new edifice on its site. Why retain machinery, which is confessedly inadequate to the object it was intended to accomplish? If medical men are best qualified to discharge the duties of Coroners, why not appoint them in place of those low and incompetent persons into whose hands we find Mr. Justice Blackstone complaining that the office, in his time, too frequently fell?[1]

[1] Excerpt from a leading article on non-medical coroners.

ASYLUM REPORTS.

Derby Borough Asylum (*Seventeenth Annual Report for the Year ending Dec. 31st, 1905*).—The admissions into this institution during the year under report numbered 103, of which 80 were chargeable to the Derby union, the remainder being out-county and private patients. Nine of the patients admitted had previously been under treatment and it is of interest to note that they had on an average kept well for nearly seven years since discharge. In 64 of the admissions the illness was stated to be of less than one year's duration, in other words they were cases likely to benefit by treatment; of these 70 per cent. presented curable forms of mental disorder. The proportion of suicidal patients admitted was high, at least 30 having meditated or threatened suicide, whilst in 18 others an attempt had actually been made. Rather more than one-half of the patients admitted suffered from some physical disease. In the opinion of Dr. S. Rutherford Macphail, the medical superintendent, at least 60 per cent. of cases admitted to asylums break down "because the nervous system is the weak point in the families from which they spring." Of the 103 admissions to this asylum, hereditary predisposition to insanity was ascertained in 37 cases, whilst in 15 other cases there was "a family history of neuroses and other hereditary affections." In 74 of the cases some exciting cause was given in the history, coming under the head of "mental or moral cause" in 28, whilst in 46 the cause was a physical one, such as alcohol, a bodily disease, or the change of life. Alcohol was responsible in only 12 per cent. of the admissions instead of the average of 20 per cent. of previous years. The daily average number resident was 331; this number reached 300 for the first time in 1893, five years after the opening of the asylum, and has steadily risen to the present figure. 39 patients were discharged recovered, giving the high proportion of 49·3 per cent. of the admissions. In addition, nine were discharged as relieved. The death-rate was the moderate one of 9·9 per cent. of the daily average number resident. The causes of death were usual ones. The death-rate from tubercle has throughout been very low in this asylum. The general health of those in the institution was quite satisfactory. There were a few sporadic cases of influenza but no epidemic occurred, whereas, it is interesting to note, epidemics of this disease have recurred it seems annually for 14 years. The important point of the tendency to relapse is referred to by Dr. Macphail, who finds that since the opening of the asylum 19 per cent. of the patients discharged as recovered have relapsed and have been re-admitted, not at all a high proportion. The Commissioners in Lunacy report favourably of the condition of the institution.

Glasgow Royal Asylum, Gartnavel (*Ninety-second Annual Report for the Year 1905*).—The total admissions into this institution during 1905 numbered 119 and were composed of private patients classified as follows: professional classes, 16; domestic, 29; commercial, 34; agricultural, seven; industrial, ten; and unknown or indefinite, 23. Of the 119, 31 sought admission voluntarily and the physician-superintendent, Dr. L. R. Oswald, finds that the percentage of recoveries is higher amongst voluntary than amongst certified patients, the probable explanation being that in the former the malady is in an early stage and therefore more amenable to treatment. Depression was more common among the patients admitted than excitement. Many of the cases received showed the alternating type of mental disorder called by some *folie circulaire;* this in Dr. Oswald's experience is more common among the educated and middle classes than among the working classes treated in county asylums. We agree that it is uncommon to meet this condition in the latter institutions. Amongst causes of insanity hereditary predisposition was found in only 35 per cent. of the admissions and in from 17 to 18 per cent. this was the only ascertained cause. Alcohol was the cause in very few cases—namely, 12—but in several in which this had been supposed to be the cause it appeared on critical inquiry that excessive indulgence was only a symptom, and this is a point well worthy of attention. About 40 per cent. of the patients admitted were in the favourable class for treatment—that is to say, the attack was the first one and had lasted less than three months. The average number resident daily throughout the year was 432. The recoveries amounted to 42, or 35 per cent. of the admissions. This is not a high proportion but it is to be noted that in addition 40 patients were discharged greatly improved. The deaths numbered 24, giving the very low proportion of 5·6 per cent. on the daily average number resident. Eight of the above number were over 75 years of age. The asylum has for years had a low death-rate. We observe from one of the reports of the Commissioners in Lunacy that acute cases are treated by rest in bed in the open air, which is an excellent plan. These reports refer to the liberal manner in which the institution provides for patients of limited means. When last it was visited by the Commissioners 57 patients were paying under £40 per annum, 155 paid £40, and 110 from £40 to £60.

Surrey County Asylum, Brookwood (*Annual Report for the Year 1905*).—From the thirty-seventh annual report of Mr. James E. Barton, the medical superintendent, it appears that the admissions at this asylum during the year on record numbered 350 and the average number resident was 1345. The mental condition of the majority of the patients admitted was, it is regrettable to learn, very unfavourable from the point of view of recovery. Many were old and feeble, no less than 116 being over 50 years of age, of whom

33 were 70 and upwards. 36 were epileptic, 16 were congenital idiots, and 24 were general paralytics. In fact, only 94 of the cases admitted were regarded as recoverable and of this number 58 were discharged during the year. The asylums committee deplores the fact that unsuitable patients are sent to its institution and calls the attention of the unions interested to the matter. The chief causes of insanity do not appear to vary in the experience of this asylum; it is stated that hereditary taint and congenital defect become more marked every year; they were traced in about 31 per cent. of the patients admitted which, however, is below the experience of many other asylums. Various forms of worry accounted for 20 per cent. and alcoholic intemperance for about 18 per cent. Various diseases, not specified in the table of causation, were causative in 35 of the cases, as to which further information would be of interest. Of the 197 discharges 126 left recovered, the recovery-rate being 38·39 per cent. of the admissions. The deaths numbered 133, the chief cause being general paralysis which accounted for 21. The death-rate amounted to 9·88 per cent. of the daily average number resident. It is distressing to note that of 1341 patients remaining at the close of the year only 46 were regarded as having a fair chance of recovery. A case of attempted suicide in a male patient presents features of interest. This man, who was not regarded as suicidal, was found hanging by the neck from a rafter, having been out of supervision for only a few minutes. He was cut down and brought round sufficiently to be removed to the ward where he relapsed into a semi-comatose state. The head and neck were greatly congested. He was bled to the extent of 20 fluid ounces, regained consciousness, and made a good recovery. He retained no recollection of the act. The accommodation on the male side is deficient, 50 cases being boarded out as well as ten idiot children.

Joint Counties Asylum, Carmarthen (Annual Report for the Year 1905).—The admission-rate for the year was lower than usual of late years, 105 patients being received. The average number daily resident was 664. The numbers resident increase steadily but slowly. The recovery-rate, reckoned on the admissions, was the satisfactory one of 46·31 per cent., having been 44 per cent. for 1904. The proportion of deaths to the average number daily resident was the low one of 8·58 per cent. The medical superintendent, Dr. E. Goodall, having measured out the accommodation available on the basis of the present requirements of the Commissioners in Lunacy, finds that on the female side the patients are in excess—though not greatly so—of the day and night space available, whilst on the male side the day-rooms are somewhat overcrowded, but there is night space for some ten additional patients. 12 of the cases admitted died within a few weeks of admission from exhaustion, of which four were cases of acute delirium. Dr. Goodall states that it is very difficult, if not impossible, to give cases of this disease that unremitting attention which they need under the usual conditions of a county asylum, in which the proportion of nurses to patients is low, and he considers that such cases illustrate the advantage of the "acute hospital" system for asylums. It may be added that they also afford a strong argument in favour of the system of receiving recent and curable cases of mental disease into suitable wards attached to general hospitals. A history of insanity or allied disorders was present in 50·5 per cent. of the admissions, and even this high figure is regarded as an under-statement. It is observed that comparative statistics as to the existence of insane and neurotic inheritance in the general population on the one hand, and the population of asylums (including persons who have been in asylums) on the other, would be instructive as throwing light upon the real value of the hereditary factor in the causation of insanity as distinct from the environmental factor. Alcohol only accounted for 12 per cent. of the admissions, a low figure compared with that shown by asylums which serve exclusively urban districts. The religious "revival" in Wales was responsible for the mental disorder in 16 cases; these were mostly individuals predisposed by inheritance to insanity. 14 of the patients admitted were aged 60 years and upwards. It is observed that there appears to be an increasing unwillingness on the part of Poor-law guardians throughout the country to make adequate provision for the aged and harmless insane in workhouses. This asylum makes no adequate provision for the segregation of consumptives; during the day these are, so far as possible, segregated in the airing-courts under verandahs. The proportion of deaths from tuberculous disease of all sorts was 17·5 per cent. of all deaths, as against 25, 23, and 28·6 per cent. for the previous three years, the last-mentioned figure being that for 1902; and the mortality from this disease per 1000 inmates was 15, as compared with 17·9 in the preceding year. These are gratifying reductions, bringing the institution into line with other asylums of similar size, and it is hoped that time may show that the improvement is traceable to various measures which of late years have been taken to provide for the stricter isolation of the tuberculous and for the disinfection of their environment. Inquiry has been made into the history of the cases which have relapsed during the past 12 years with a view to acquire information as to the durability of recovery after discharge. During this period 143 patients were admitted who had had previous attacks, and of these 121 had relapsed once. Of the latter 18 had kept well for from three to six years and 29 for from six to 33 years. The remaining 74 remained well for varying periods to a maximum of three years only. Dr. Goodall is of opinion that these results are probably much inferior to what might be looked for from the returns of institutions receiving the better educated and more comfortable classes. This question of the durability of recovery in mental cases merits further inquiry. Of 64 cases of first attack only 33 were received within three months of the commencement of the illness. The general health of the institution was satisfactory. The Commissioners in Lunacy in the course of their annual report on the institution refer to a regrettable dispute which exists between the three local authorities owning the asylum as to quotas payable towards the upkeep of the building and which is of some years' standing, the practical consequence being that administrative reforms which are required in the interests of the patients are delayed.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8717 births and 3650 deaths were registered during the week ending July 21st. The annual rate of mortality in these towns, which had declined from 13·2 to 11·7 per 1000 in the four preceding weeks, rose again last week to 12·0 per 1000. During the past four weeks the death-rate has averaged 12·1 per 1000, the rate in London during the same period being 11·9 per 1000. The lowest death-rates last week in the 76 towns were 4·7 in Hanley, 4·9 in Handsworth (Staffs), 5·4 in Rochdale, 5·7 in Leyton, 5·9 in Reading, and 6·2 in Cardiff; the highest rates were 16·5 in Liverpool, 17·0 in Huddersfield, 17·4 in Merthyr Tydfil, and 17·8 in Stockport and in Burnley. The 3650 deaths registered in the 76 towns last week were 94 more than the number in the previous week, and included 424 which were referred to the principal epidemic diseases, against 373, 406, and 361 in the three preceding weeks; of these 424 deaths, 165 resulted from diarrhœa, 104 from measles, 59 from whooping-cough, 43 from diphtheria, 38 from scarlet fever, and 15 from "fever" (principally enteric), but not any from small-pox. The deaths from these epidemic diseases were equal to an annual rate of 1·4 per 1000 in the 76 towns and to 1·5 per 1000 in London. No death from any of these diseases was registered last week in Southampton, Coventry, West Hartlepool, or in ten other smaller towns, while they caused the highest death-rates in Norwich, Birkenhead, Liverpool, Wigan, Salford, Burnley, Huddersfield, and Rotherham. The greatest proportional mortality from measles occurred in Salford, Burnley, and Huddersfield; from whooping-cough in Birkenhead, York, and Swansea; and from diarrhœa in Willesden, Norwich, Birkenhead, Liverpool, St. Helens, Wigan, Salford, Burnley, and Rhondda. The 43 deaths from diphtheria included ten in London, three in Liverpool, and two each in Croydon, Walthamstow, Plymouth, Bristol, Birmingham, and Derby; of the 38 fatal cases of scarlet fever 12 occurred in London, four in Liverpool, three in Birmingham, three in Manchester, and two each in Hornsey, Bristol, Leicester, and Leeds; the 15 deaths from "fever" included six in London and two each in West Ham and Wigan. No fatal case of small-pox was registered in any of the 76 towns during the week. The number of small-pox patients in the Metropolitan Asylums hospitals, which had declined from 13 to five at the end of the four preceding weeks, had

further fallen to two at the end of last week; no new cases of small-pox have been admitted into these hospitals during the past four weeks. The number of scarlet fever patients remaining under treatment in these hospitals and in the London Fever Hospital at the end of the week was 2942, against numbers increasing from 2225 to 2842 at the end of the 13 preceding weeks; 413 new cases were admitted during the week, against 366, 378, and 406 in the three preceding weeks. The deaths in London referred to pneumonia and other diseases of the respiratory organs, which had been 118 and 119 in the two preceding weeks, further rose to 133 last week, but were slightly below the corrected average number in the corresponding periods of the four preceding years. The causes of 39, or 1·1 per cent., of the deaths in the 76 towns last week were not certified either by a registered medical practitioner or by a coroner. The causes of all the deaths were duly certified in West Ham, Leicester, Nottingham, Salford, Sheffield, Newcastle-on-Tyne, Cardiff, and in 49 other smaller towns; nine uncertified deaths were registered in Liverpool, five in London, four in Birmingham, three in Manchester, two in Bradford, two in St. Helens, and one each in 14 other towns, including Bristol, Leeds, and Hull.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been 15·3 and 14·3 per 1000 in the two preceding weeks, further fell to 13·7 per 1000 last week, but was 1·7 per 1000 above the mean rate during the same period in the 76 large English towns. The rates in the eight Scotch towns last week ranged from 10·2 in Paisley and 10·7 in Edinburgh to 15·3 in Glasgow and 24·2 in Perth. The 470 deaths in the eight towns showed a decrease of 21 from the number in the preceding week, and included 12 which were referred to whooping-cough, 11 to diarrhœa, seven to measles, five to diphtheria, and five to "fever," but not any to small-pox or to scarlet fever. In all, 40 deaths resulted from these principal epidemic diseases last week, showing a decline of 23 from the number returned in the previous week. The 12 deaths attributed to whooping-cough were five below the number in the preceding week, and included eight in Glasgow and three in Aberdeen. The fatal cases of diarrhœa, which had been 20, 18, and 23 in the three preceding weeks, decreased last week to 11, of which six occurred in Glasgow and three in Dundee. The seven deaths from measles were considerably fewer than the number in any other recent week, and included three in Glasgow and two in Edinburgh. The five fatal cases of diphtheria were slightly in excess of the numbers in the two previous weeks; three of these deaths were registered in Glasgow, where also four fatal cases of cerebro-spinal fever, included under the heading "fever," were recorded. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 54 and 59 in the two preceding weeks, further rose to 66 last week and slightly exceeded the number in the corresponding week of last year. The causes of 16, or 3·4 per cent., of the deaths registered in the eight towns last week were not certified, the proportion of uncertified deaths in the 76 large English towns during the same period being 1·1 per cent.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 16·4, 16·9, and 18·7 per 1000 in the three preceding weeks, further rose to 20·9 per 1000 during the week ending July 21st. During the 13 weeks of last quarter the death-rate averaged 21·4 per 1000, against 14·8 in London and 17·1 in Edinburgh. The 152 deaths of Dublin residents during last week showed an increase of 16 over the number in the preceding week, and included ten deaths from the principal epidemic diseases, against five, four, and 12 in the three preceding weeks; of these ten deaths, three were referred to whooping-cough, three to diarrhœa, two to measles, one to diphtheria, and one to "fever," but not any to small-pox or to scarlet fever. These ten deaths from the principal epidemic diseases were equal to an annual rate of 1·4 per 1000, the rate from the same diseases last week being 1·5 in London and 0·5 in Edinburgh. The 152 deaths in Dublin included 26 of children under one year of age and 47 of persons aged 60 years and upwards. Five inquest cases and three deaths from violence were registered; and 59, or 39 per cent., of the deaths occurred in public institutions, the proportion in London being 40 per cent. The causes of five, or 3·3 per cent., of the 152 deaths were not certified either by a registered medical practitioner or by a coroner; the proportion of uncertified deaths during the same period being 0·5 per cent. in London and 4·3 per cent. in Edinburgh.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: J. McElwee to the *President*, temporary, and A. McLean to the *Renown*. Staff Surgeon H. Cleft to the *Hawk*. Surgeon P. H. Bannister to the *President*, additional for three months' course at West London Hospital.

ROYAL ARMY MEDICAL CORPS.

Lieutenant-Colonel Percy H. Johnston, C.M.G., is placed on retired pay (dated July 13th, 1906).

Colonel O. Todd has been appointed to officiate as Principal Medical Officer, Western Command, India, vice Colonel F. W. Trevor, on leave.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel D. Ffrench-Mullen, Bengal, has been appointed to officiate as Principal Medical Officer, Sirhind and Jullundur Brigades, vice Colonel H. Hamilton, C.B., on leave.

THE ROYAL VICTORIAN ORDER.

Lieutenant-Colonel Bruce Morland Skinner, R.A.M.C., Secretary to the Advisory and Nursing Boards of the War Office, has been appointed a member of the Fourth Class of the Royal Victorian Order.

TINNED MEAT IN PLYMOUTH GARRISON.

According to Plymouth Coast Defence Orders, dated July 17th, when preserved meat is issued officers commanding units are to arrange for a regimental board of officers to assemble to open and to inspect all tins of meat before use and, where possible, the medical officer in charge of troops will attend.

RESUMPTION OF MEDICAL CLASSES IN RUSSIA.

It is announced in the *Torgovo Promyshlennaya Gazeta* that all classes in the Military Medical Academy will begin work on Sept. 14th this year. This may be rather a sanguine prophecy but there are other evidences that it is the intention of the authorities not to allow the military medical organisation to lapse into chaos. For example, the committee appointed to draw up the new regulations for the constitution of the military sanitary elements of the army has recently considered the question of grades for military medical officers. It was agreed to be indispensable that these officers should be graded as generals, staff officers, and superior officers with all their prerogatives. They will constitute a special official corps—"the Corps of Military Medical Officers"—and they will wear distinctive uniforms and enjoy special professional as well as military privileges.

SOCIETY FOR RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.—A quarterly court of the directors of this society was held on July 11th at 11, Chandos-street, Cavendish-square, London, W., Dr. G. F. Blandford, the President, being in the chair. 14 members were present. The death of Dr. John Clarke was reported, who was elected a member in 1847 and had been one of the vice-presidents since 1867. Four new members were elected. The sum of £1358 10*s.* was voted for the half-yearly grants to the annuitants of the charity. Five letters had been received from widows of medical men since the last court asking for relief and this had in each instance to be refused owing to the fact that their husbands had not been members of the society. Mr. Edward J. Blackett was re-elected secretary. The membership of the society is open to any registered medical man who at the time of his election is in practice within a radius of 20 miles from Charing Cross. Full particulars and application forms may be obtained from the secretary, 11, Chandos-street, Cavendish-square, London, W. The next election is on Oct. 11th, and names of intending candidates must be received on or before Sept. 19th.

Correspondence.

"Audi alteram partem."

DENDRITES AND DISEASE.

To the Editors of THE LANCET.

SIRS,—Sir William Gowers's lecture on Dendrites and Disease[1]—surely one of the most luminous contributions to modern neurology—raises many questions of absorbing interest. To two of these I propose with your permission to make a brief reference.

1. Sir William Gowers assumes that the dendrites of adjacent neurons are separated by, and influence one another through, an intervening "matrix"—i.e., that there is no direct conduction of nerve impulses from one neuron to another—but that a dendrite of one neuron so influences the matrix in which it terminates as to generate a nerve impulse in the adjacent dendrite of another neuron. He, moreover, regards the dendrites as being contractile, and he suggests that the influence which the dendrites of one neuron exert on those of adjacent neurons can be regulated by means of this contractility; when, e.g., they contract firmly all communication between adjacent neurons is cut off, as may happen during sleep and functional anæsthesia; when, on the other hand, they relax neighbouring neurons are brought into functional relation.

I venture to raise the question whether during this dendritic relaxation adjacent dendrites of separate neurons may not merely come into close proximity, but be brought into actual contact, so as to admit of the direct *conduction* of nerve impulses from one neuron to another, which would be a far more simple process than the induction *de novo* of a nerve impulse in the second cell; and not only so, but by means of this direct conduction it would be easier, one would think, for a particular dendrite of one neuron to affect a particular dendrite of another neuron, *and no other*, than by the less direct method. The great difficulty in the way of accepting this view is the fact that, so far as our actual knowledge goes, nervous impulses are always started in neurons by a *de novo* generation through a non-nervous medium, as in the case of the sensory end-organs; it must, moreover, have been solely through a non-nervous medium that nerve impulses were generated when neurons first evolved in the animal kingdom.

2. The view that the influences passing between adjacent neurons can be regulated by means of the contractility of their dendrites is one which throws an altogether new light on many difficult problems in neurology. The ultimate dendrites of a neuron are probably to be counted by the thousand, and one can conceive how, by a greater or less degree of contraction of this or that dendrite belonging to adjacent neurons, one neuron may be capable of influencing another in a multitude of different ways. Modern histology seems to point to the conclusion that every neuron contains a definite number of fibrils along which nerve impulses are conducted. These impulses are thus compelled to travel along definite, pre-determined routes. The fibrils do not, as Sir William Gowers points out, end in the body of the neuron cell but pass right through it, so that all nerve impulses must start at their extremities—i.e., at the termination of the dendrites or axites. We do not know whether by education the fibrils can be increased in number; quite possibly they cannot be. Now, seeing that the fibrils pass right through the body of the neurons and that nerve impulses must travel along the fibrils, it is obvious that if there were actual permanent union between the adjacent dendrites of neighbouring neurons, all nervous action would tend to be stereotyped, and it would be impossible for the nervous system to acquire the power of executing new combinations except by the development of new fibrils, and, seeing how endless are the new combinations which the nervous system can be taught to execute, this would imply an increase in the number of the fibrils so great as to be physically impossible. These difficulties are removed if we assume that all nervous coördination is effected by an adaptive contraction and relaxation of neighbouring dendrites, for in this way it would be possible to link up in a multitude of different ways particular fibrils of one neuron with particular fibrils of another neuron, and thus compel nerve impulses to pass along particular routes. On this view the education of the nervous system would essentially consist in the acquisition by the dendrites of special powers of adaptive contractility.

From analogy with telephonic methods, we may speak of this as the principle of "dendritic exchange," and though it does not explain how the dendrites come by their power of adaptive contractility, and of forming new exchanges, yet its formulation seems to be a step towards an ultimate explanation of the well-nigh limitless capacity of the nervous system to make new acquisitions, many of them of a bewildering complex nature.

I am, Sirs, yours faithfully,

Wimpole-street, July 16th, 1906. HARRY CAMPBELL.

[1] THE LANCET, July 14th, 1906, p. 67.

LEPROSY AND FISH-EATING.

To the Editors of THE LANCET.

SIRS,—Referring to your review of Mr. Jonathan Hutchinson's book[1] and to his recent letter in your columns[2] I shall be obliged if you will permit me to point out a fallacy that underlies at least one of his arguments and invalidates some of his conclusions.

The contention to which I refer is that Christianity—especially the Catholic type, but, in lesser degree, Protestantism also—fosters leprosy by its encouragement of fish-eating as contrasted with other creeds which either forbid, or at least discourage, it. Mr. Hutchinson supports this view by quoting what he considers the excessive proportion of Christians among the inmates of some of the Indian leper asylums visited by him. Had he carried his inquiries a little further he would have found in almost all cases that the Christian lepers, from whose numbers he deduces the prevalence of the disease among Indian Christians, *had become converts after they were lepers*, and that whatever weight they possess as evidence should consequently go into the opposite scale. Let us take a specific instance in which the facts are beyond question. Referring to his visit to the leper asylum at Tarn Taran, Punjab, Mr. Hutchinson writes (p. 106): "On the calculation that in the community there were two lepers per 10,000, the Mussulman population (14,000,000) might have supplied 2800 and the Hindoo population of 13,000,000 2600, whilst the little Christian population of only 72,000 ought to have sent not more than 14; it did, however, to this one asylum alone, which is only one out of five under missionary care in the Punjab, send no fewer than 34. Under the term 'Christian' are here included Protestants as well as Catholics and English as well as natives. If we restrict the calculation to the native Christians, which is only fair, seeing that the Europeans supply no lepers, we should then find that its calculated proportion would be only eight. Very similar statements apply to the Calcutta Asylum, to that of Madras, and to that of Bombay."

Mr. Hutchinson takes for granted that these 34 Christian lepers are contributed by the native Christian community of the district and argues that they are four times as numerous as they should be. The fallacy of this assumption and of any argument based on it is clear from a single fact—viz., that in every one of these 34 cases *the leprosy preceded the Christianity*. Let me support this assertion by the testimony of a witness possessed of actual knowledge. The Tarn Taran Asylum is one of 45 such institutions supported or supervised by the Mission to Lepers in India. For 21 years religious teaching has been provided for its inmates under the care of the Rev. E. Guilford, who is now the superintendent of the asylum, the management of which has been transferred to the mission by the Punjab Government. In a letter just received and referring to Mr. Hutchinson's statement Mr. Guilford writes: "Of those 34, every one had become a leper before he or she was admitted into the Church. I have worked in the Punjab now for nearly a quarter of a century and during that time I have never seen one single case of leprosy amongst our native Christians." This emphatic testimony also rebuts another of Mr. Hutchinson's suppositions—viz., that "the number in any given asylum does not represent the total in the Christian population of the district. Many of the Christian lepers are, no doubt, still at their own homes" (p. 106). Whatever may be the case in those parts of India in which the Christian population is largely Romanist, this is certainly not correct as

[1] THE LANCET, June 16th, 1906, p. 1695.
[2] THE LANCET, July 7th, 1906, p. 45.

applied to districts like the Punjab. The experience of the agents of the mission to lepers in all parts of India coincides with that of Mr. Guilford—viz., that cases of leprosy are very few indeed among Indian Protestant Christians and that a converted leper applying for admission to an asylum is a rare event.

The importance of this particular aspect of the general question will be clear when it is added that there are in Indian asylums connected with the Mission to Lepers no fewer than 2700 Christians, at least 95 per cent. of whom were lepers prior to conversion, a fact which must largely modify Mr. Hutchinson's conclusions that they indicate the prevalence of leprosy among Indian Christians.

On the general question of the relation between fish-eating and leprosy I offer no opinion. My personal attitude is one of suspended judgment; "not proven" must at present, I think, be the verdict. But however this may be Mr. Hutchinson deserves our gratitude for having elicited many facts which should at least contribute to a solution of this perplexing problem.

I am, Sirs, yours faithfully,

JOHN JACKSON,
Organising Secretary to the Mission to Lepers in India and the East.

Exeter Hall, Strand, London, W.C., July 18th, 1906.

A CASE OF IDIOSYNCRASY TO EGG ALBUMIN.

To the Editors of THE LANCET.

SIRS,—The following case of extreme idiosyncrasy to egg albumin is, I believe, of considerable rarity and is remarkable from the fact that this substance produces in the patient in question severe gastro-intestinal irritation when taken internally and sets up urticaria when applied locally to the skin.

The patient, a woman, aged 26 years, came under my notice in the early part of this year with the history that from earliest childhood she had been unable to take eggs or to eat any article of diet which contained them. It was stated that the amount of egg required to produce severe symptoms was extremely small, even the minute quantity contained in the glazing of a roll being sufficient to cause considerable uneasiness. The first occasion on which egg was given to her was stated to have been at the age of ten months and nearly resulted in her death, the symptoms consisting of muscular rigidity and cyanosis. Subsequently many attempts were made to establish toleration to eggs but without result. At the present day the patient finds her disability of the greatest inconvenience, as the certainty of becoming ill if she should happen to partake of any dish in the composition of which eggs have been used practically precludes her from dining away from home. The symptoms depend upon the dose of egg which is taken. A quantity equivalent to four grammes would appear to be a relatively large dose and is followed in a short time by stinging in the throat, epigastric pain, vomiting, and later by either diarrhœa or obstinate constipation. With smaller doses pain comes on about an hour after the egg has been taken and lasts a longer or shorter time according to the dose.

In addition to the gastro-intestinal irritation produced by the ingestion of the egg, it was stated to me that the application to the skin of the raw white of egg would raise a blister. Being naturally sceptical of the possibility of this I arranged for an experiment to be made in my consulting room and the result showed beyond a doubt that egg albumin certainly possessed a directly irritating action upon the skin. On April 10th, at 12 o'clock, a little raw white of egg was spread over an area on the forearm of the size of a half-crown. In half an hour's time this area was deeply reddened and presented several raised wheals. I may state that the skin over the whole body was remarkably irritable and dermographic. The organs of the body were sound, there was no albumin in the urine, and no signs of gastro-intestinal disturbance. As the patient had consulted me with the hope of finding some means of cure, or at least of alleviation, I suggested that vegetable charcoal might possibly be found to act as an antidote. My suggestion has been acted upon with apparent success. The patient writes that having accidentally taken some egg in soup, which judging from previous experience would certainly have brought on an attack, she took at once a charcoal pastille, with the result that no unpleasant effects were experienced. Experiments are now proceeding with the object of ascertaining the exact amount of egg albumin which is neutralised by a given weight of charcoal.

I am, Sirs, yours faithfully,

GEORGE HERSCHELL, M.D. Lond.,
Senior Physician to the Kensington General Hospital.

Harley-street, W., July 21st, 1906.

STUTTERING.

To the Editors of THE LANCET.

SIRS,—The lack of any reference to spirometric readings in the lecture by Dr. W. S. Colman on Stuttering published in THE LANCET of July 14th, p. 70, strikes me as a very noticeable feature. I have made some observations in cases of stuttering and every case I came across was below the proportional chest build. The chest was not well developed and the respiratory capacity, as tested by a spirometer, was considerably below the normal—in other words, the pump supplying the voice reed was inadequate. The breathing capacity is always increased by encouraging the development of abdominal breathing, which is so well marked in good singers, but is discouraged by the writer of the article who observes "that singing relieves the stuttering" and calls it a "trick." The explanation is simply that the words of the song and the time of the tune unconsciously give the singer an idea of the quantity of air required to phonate, and it is this idea that requires cultivation in order to relieve stutterers of their impediment.

I am, Sirs, yours faithfully,

Swansea, July 17th, 1906. G. ARBOUR STEPHENS.

THE TREATMENT OF RINGWORM.

To the Editors of THE LANCET.

SIRS,—I have read with interest the various articles and letters which have appeared in THE LANCET on ringworm and I have been struck with the ease with which some men can cure it with comparatively simple remedies. My experience unfortunately has been quite the reverse. In deep-seated ringworm parasiticides and escharotics I have found of little or no practical utility. It would take up too much space to enumerate all the drugs I have tried for months without success. About a year ago, however, an article by Dr. H. G. Adamson appeared in THE LANCET on the Treatment of Ringworm of the Scalp by Means of the X Rays,[1] and I asked Mr. Blackburn of Messrs. Mottershead and Co. to carry it out according to the directions on several cases which had resisted all treatment for months. This he did, measuring the rays with pastilles, which necessitated an exposure of from 20 to 24 minutes for a single sitting for each patch. Some of the children had it applied three or four times for different patches at intervals of several days. Their heads were then anointed with a weak ammoniated mercury ointment. In three weeks the hair came out, leaving a bald patch which in the course of a few months became covered with hair free from ringworm. To my mind x ray treatment when it can be obtained is the most satisfactory means yet devised for the cure of ringworm.

I am, Sirs, yours faithfully,

J. W. STENHOUSE, M.B. Edin., M.R.C.S. Eng.,
Medical Officer, Royal Deaf Schools, Old Trafford.

July 2nd, 1906.

DR. LANCEREAUX'S METHOD IN THE TREATMENT OF ANEURYSM.

To the Editors of THE LANCET.

SIRS,—Many of your readers will have noted with interest your review of "Heart Disease and Aneurysm of the Aorta," by Sir William H. Broadbent and Dr. John F. H. Broadbent, on p. 94 of THE LANCET of July 14th. Although dealing especially with treatment these authors offer little encouragement as regards the use of the one important therapeutic measure introduced in the last few years in the treatment of aneurysm—namely, the subcutaneous injection of gelatinised salt solution. As your reviewer remarks, "their condemnation of this means of treatment is rather too sweeping." May I call the attention of your readers to Dr. Lancereaux's communication to the Academy of Medicine on this subject, briefly summarised in the same number of THE LANCET (July 14th) by your able Paris correspondent.

[1] THE LANCET, June 24th, 1905, p. 1715.

A full translation of Dr. Lancereaux's remarkable communication will appear in the September number of the *Paris Medical Journal*.

May I be allowed to supplement your Paris correspondent's note by pointing out that Dr. Lancereaux has used this method since 1899, has found it free from danger in an experience of over 1200 injections, and that he has been led to consider it as the only method meeting the indications for treatment. In this, his latest, communication on the subject, Dr. Lancereaux gives full details of three cases of aneurysm—of the abdominal aorta, of the first part of the aorta with pre-sternal tumour, and of the ophthalmic artery with throbbing exophthalmos—all apparently cured. The injection, consisting of 200 grammes of a 7 per 1000 saline solution containing five grammes of gelatin, is made into the gluteal region every five or six days (being generally completely absorbed in a few hours), from 30 to 40 being usually required. Successful cases have been recorded even when the skin over the sternum was thinned by the aneurysmal sac. Such treatment surely holds out more hope than can be expected from rest, diet, potassium iodide, &c.

I am, Sirs, yours faithfully,

Paris, July 19th, 1906. A. A. WARDEN.

ASSOCIATION OF MEDICAL DIPLOMATES OF SCOTLAND.

To the Editors of THE LANCET.

SIRS,—May I ask (through the medium of THE LANCET) those holding Scotch qualifications kindly to reinform me of the various disabilities and grievances they may know appertaining to these qualifications, in order that they may be investigated and redressed, if possible, by the above association.—I am, Sirs, yours faithfully,

CLAUDE ST. AUBYN-FARRER,
7, Westbourne Park-road, W., July 18th, 1906. President.

THE AFTER-EFFECT OF ETHYL CHLORIDE ANÆSTHESIA.

To the Editors of THE LANCET.

SIRS,—I have followed with interest the reports on ethyl chloride as an anæsthetic, especially in dental work. I have used it for that purpose in a large number of cases and find it a good anæsthetic, as there is a period of analgesia after the patient is conscious. As yet I have had no fatal cases but have noticed bad after-effects. I always fill the bag with nitrous oxide and then gradually drop into the bag from a side tube three cubic centimetres of ethyl chloride (for an adult). Dr. A. B. Kingsford in his reports says that he has noticed two forms of rigidities, but according to his experience they come on during the anæsthesia. In all my cases the rigidity was only noticed after the dental operation was past. The local spasm I found most frequently in the fingers; the patient complained of great pain and it took considerable force to relax the same. This form of rigidity occurred very frequently. As to the second form of rigidity the patient took the anæsthesia all right and after the teeth were out he suddenly took what to me looked exceedingly like an epileptic fit. Then he became quite rigid in the opisthotonos position along the dental chair. The pulse could hardly be felt, the breathing ceased for a few seconds, his head was retracted to the one side, the teeth were clenched, and the eyes staring and fixed with the pale grey ash colour of death. He suddenly became conscious and felt sick and vomited, but on trying to get out of the dental chair he had a tendency to become rigid again. His pulse was 39 but it gradually became 53 after a hypodermic injection of one-fortieth of a grain of strychnine. It may be interesting to state that his pupils were unequal for 48 hours after the operation, the right dilated and the left pin-pointed. On examination of his heart the first sound in the mitral area was not heard distinctly but otherwise he seemed in good health. The difficulty I find in using nitrous oxide alone in dental work—and rather to get the patient to sit different times—is that with some patients you cannot get a proper anæsthesia with gas at all. I am strongly of the opinion that there is always great danger in giving ethyl chloride in the sitting posture. I may state that I always prepare my patients for the operation as if I was going to give chloroform. Thanking you in anticipation,

I am, Sirs, yours faithfully,

JOSEPH STARK, L.R.C.P. & S. Edin.
Fruitfield, Airdrie, July 23rd, 1906.

THE GENERAL MEDICAL COUNCIL: THE DIRECT REPRESENTATIVE FOR SCOTLAND.

To the Editors of THE LANCET.

SIRS,—We have been instrumental in promoting a requisition to Dr. Norman Walker inviting him to be a candidate for the post of Direct Representative for Scotland on the General Medical Council. Dr. Walker received so large a measure of support on the last occasion and has since continued to take so active and useful a part in the promotion of the improvement of medical education as well as in other matters of medical politics that we have every reason to believe that on this occasion his candidature will be successful.

The requisition has been largely signed by practitioners from all parts of Scotland and Dr. Walker has indicated his willingness to accept it. We shall be glad to hear from those who wish to join the general committee.

We are, Sirs, your faithfully,

G. A GIBSON,
3, Drumsheugh-gardens, Edinburgh.
F. W. N. HAULTAIN,
July 24th, 1906. 12, Charlotte-square, Edinburgh.

A NECESSARY REPUDIATION.

To the Editors of THE LANCET.

SIRS,—My attention has recently been drawn to an article in the *British Medical Journal* of July 14th where, under the column Medico-Legal and Medico-Ethical, reference is made to a weekly paper called the *Free Lance* and to a Dr. A. W. Wheatly advertised in its columns.

On applying at the offices of the General Medical Council I find that I am the only man with those initials and name on the Medical Register. The subject being, as the *British Medical Journal* describes, "Touting for Patients" (and I may add in a very objectionable way), I take this my earliest opportunity of disclaiming any knowledge of the person there described, or connexion of any kind with him or his methods.

Your sense of justice and your knowledge of the injury that may accrue to me from this base use of my name will, I feel sure, enlist your sympathy and help by publishing this my disclaimer in the next issue of THE LANCET.

I am, Sirs, yours faithfully,

ARTHUR W. WHEATLY, M.B.Durh.,
Consulting Surgeon, Western Ophthalmic Hospital.
Kensington, S.W., July 24th, 1906.

*** We sympathise warmly with our correspondent, who has a right to feel intensely annoyed with the *Free Lance*.—ED. L.

THE UNIVERSITIES AND THE FUTURE OF DENTISTRY.

To the Editors of THE LANCET.

SIRS,—The progress and development of the profession of dentistry must always be matters of interest to medical men. Whether in the future the two professions will tend to be differentiated more clearly or to become amalgamated completely the aims and objects of the practitioners of medicine and dental surgery are so analogous that any movement on one side will naturally be watched sympathetically by the other. Considerable changes are at the moment taking place in dental education which are likely to have far-reaching effects upon the ultimate development of the profession. With regard to the movement for the establishment of university degrees in dentistry a hope has been very generally expressed that it might be found possible to grant to the members of a learned profession the customary hall-mark of a liberal education. In the practical carrying out of this idea a very distinct division in the views of the teachers of dentistry has been disclosed. While one point of view has been shown to be held by a majority of the teachers in most provincial centres of dental education, an antagonistic view seems very strongly held by an important majority of metropolitan teachers. So distinctly local does the cleavage in the teaching profession seem to be that I may conveniently speak of the two opposing views as the metropolitan and the provincial ideals for the development of the dental profession. The metropolitan ideal appears to be the establishment of dentistry as a special department of medicine on lines analogous to the

position at present occupied by ophthalmology or laryngology, whilst in the provinces the aim of the teachers is rather the development of an independent or sister profession working hand in hand with medicine but under a separate organisation and having an educational curriculum planned to meet its own special needs. In their attitude towards the proposals that have been made by various universities with regard to the regulations for degrees in dentistry the two parties have very clearly indicated the hopes which they entertain for the future of the profession. In London the majority of teachers have expressed the opinion that no degree in dentistry should be conferred on any person who does not already possess a university degree qualifying him to practise medicine and surgery. Several provincial universities have, on the other hand, already established degrees in dentistry, the regulations for which merely require that candidates shall have worked out a more elaborate curriculum and have attained a higher standard of knowledge of their own special subjects than those hitherto demanded of candidates for a licence in dental surgery. It does not appear that the University of London has yet decided whether to fall in with the wishes of the majority of metropolitan teachers or to follow the example of the provincial universities which have already instituted independent degrees. It is, indeed, not quite clear whether the University would best meet the wishes of metropolitan teachers of dentistry by offering a special dental degree to its medical graduates or by withholding a degree in dentistry altogether.

To withhold degrees altogether would obviously be the best means to secure that in the University dental surgery should be treated on the same footing as any other special branch of medicine or surgery. But whether this course is pursued or whether special degrees in dentistry are offered to medical graduates, or whether the degree of Master of Surgery is modified so as to be adapted to the requirements of surgeons wishing to show special knowledge of dentistry, the University of London in thus supporting the metropolitan ideal of dental development may inflict a serious blow to dental education in London, as well as to the best interests of the dental profession and of the public. The attempt to secure that the practice of dentistry should be confined to the members of the medical profession is one upon which the medical profession is justified in having a very strong opinion, and I am sure that my views are shared by many. If the ideal of some that all dentists should be fully qualified medical men ever had any prospect of fulfilment it was entirely shattered, I think, by the passing of the Dental Act. Some progress towards the absorption of the dental into the medical profession has hitherto been possible, because the taking of diplomas or degrees in medicine has hitherto been the only method of satisfying the ambition of a dental student who felt that a mere licence in dental surgery allowed him insufficient scope for showing his determination to rise to the higher ranks in his profession. This means of satisfying his ambition has been encouraged by the Royal Colleges and by the medical schools, and has been undoubtedly successful in helping dentists, who become also qualified medical practitioners, to secure appointments at hospitals, the recommendations for which are generally made by the medical staff. These proceedings have been watched by some interested in dental education with complacency and by others with much anxiety. The medical curriculum can hardly be regarded as an ideal education either of mind or hand for those who do not wish to practise medicine; and many have insisted that to require a dentist to be also educated as a doctor of medicine is not more certain to make him a better dentist than if he were required to be educated also as a doctor of divinity or of music. The education of those dentists, whose ambition leads them to qualify also as medical men, must be crowded and cramped, while there is risk that the curriculum for all dentists may be badly arranged because it may be dominated by the ideas of those who wish to make it easy for a dental student at any time to become also a medical student. Another serious result of this policy of amalgamation has been the constant "bleeding" of the dental profession of its best material. It is only the students of good preliminary education and keen enthusiasm who can face the hard work and strain of securing a medical as well as a dental qualification. It is stated by those thoroughly conversant with the facts that a large proportion of these best dental students so soon as they are qualified desert dentistry and practise either medicine or surgery.

In considering this important question it must not be forgotten that a qualified medical practitioner has conferred upon him by the Dental Act all the rights and privileges of a qualified dental surgeon. The attempt therefore to amalgamate the professions practically amounts to an attempt to eliminate the specially qualified dental surgeon. To many it appears that its ultimate result would be to throw back the practice of dentistry into the hands of the barbers and unqualified and uneducated persons who performed these duties for the public before the Dental Act was passed. To me it seems inconceivable that a sufficient supply of dentists to deal with the immense public need should ever be admitted through the portal of the medical profession, although I know that many, and probably you, Sirs, hold the opposite view. But the action of the provincial universities has removed the lever which the metropolitan idealist hitherto possessed for the promotion of this view. The ambitious student can now seek a university degree in dentistry in addition to his dental diploma, confident that the extra training to which he will be required to submit will improve his capacity either as a practitioner of dentistry or as a researcher in the departments of dental therapeutics or pathology. If he cannot secure such a degree in the university of his own city he will seek it elsewhere. It seems probable, therefore, that those cities the universities of which refuse to recognise special dental attainments unless they are accompanied by the technical knowledge required of a qualified medical practitioner, will be seriously handicapped in their attempt to maintain efficient schools of dentistry.

I am, Sirs, yours faithfully,

A LONDON PHYSICIAN AND TEACHER.

TWO POINTS OF MEDICAL ETHICS.

To the Editors of THE LANCET.

SIRS,—I have the honour to write to you to ask for a decision on two points of medical ethics which refer chiefly to medical officers in military employ attached to regiments.

1. When a regimental officer reports sick with some disease such as gonorrhœa, scabies, or acute alcoholism, to which, rightly or not, a certain amount of shame attaches, what should be the medical officer's procedure as regards his daily report of sick to his commanding officer, such sick report being a printed form with a space for the names and diseases of sick officers and being in no way a confidential report? Besides being seen by the commanding officer, it is seen by numerous clerks, sergeants, and officers, hence the question arises on which I ask a decision—viz., What is one's duty considering both one's duty as a medical officer to the officer commanding (who writes the regimental officers' annual confidential report) and one's duty as his doctor to the patient?

2. The other point on which I ask your opinion is as follows. All regimental officers are, of course, entitled to the services of their medical officer. A case occurs in which a medical officer is attending a regimental officer for illness, the regimental officer, without informing his medical officer, goes to see another medical man (not connected with the service) who attends the officer for two or three days; the officer then deciding to revert as a patient to his own medical officer, sends for him, maintaining he (the regimental officer) has a right to any services he may call for. The medical officer, after protesting against the professional indignity to which he had been submitted, continues to treat the regimental officer. A few months later the same officer again falls ill and again behaves in an exactly similar manner and the medical officer cannot, according to regulations, refuse to attend the regimental officer in future. What should he do? I inclose my card.

I am, Sirs, yours faithfully,

June 1st, 1906. I.M.S.

WHAT IS A SPECIALIST?

To the Editors of THE LANCET.

SIRS,—A little while ago I wrote to you virtually asking this question: Can any medical man, especially an old man, if he chooses to practise as a specialist, call himself such on his door-plate? You courteously replied in the negative but with your permission I would like to enlarge my plea, as follows:—

Specialists, as we now have them, are mostly limited practitioners with a hospital appointment. The hospital appointment, probably well deserved, is a good advertisement, for it brings the men and their names prominently before the public and gives them opportunities for practice and for self-advertisement which are not possessed by the men who fail to get such appointments. The staff of a hospital is necessarily limited. The men already on it have a power which they can use, on occasion, for the benefit of a friend or a favourite. Of two young men equally well qualified and both ambitious to secure a vacant post the one who is looked upon by a member of the staff with friendly regard as well as respected for his ability and attainments is more likely to secure the majority of votes than the one who has merely first-rate qualifications and testimonials, for boards of management are always (or usually) open to the advice of the professional members and readily accept the dictum of the man who has won their confidence either by plausibility or by good work.

Now I do not blame either the board or the interested and friendly advocate. Most of us probably when seeking an appointment much to be desired would gladly avail ourselves of such powerful help and the man who is successful in his application may be justly congratulated. But the man who fails may be equally deserving, and his failure, as things go now, may profoundly and adversely affect his subsequent career. Often a young man, qualified by years of patient toil, both at books and at the bedside; nay, who is already the occupant, perhaps, of a minor post in a hospital, has his prospects blighted and his heart discouraged by an unwarranted and partisan preference for a competitor, whose qualification, judged solely with regard to merit, is much inferior to his own. I know of such a case and therefore can write with authority and, doubtless, a similar knowledge belongs to many others in the profession. What, then, should hinder this young man from doing that which would give him the next best chance of pursuing with success the career upon which he has set his heart? What harm can there be? what moral or legal obligation would be disregarded, should he set himself forward, to his friends and to others, as a man desirous of following a special line of medical or surgical practice? Already his friends know of his special preparatory work and of his proclaimed, and perhaps acclaimed, intention. Why should he have to sink into the whirlpool of competitive general practice just because, through no fault or deficiency on his part, he has failed to obtain an entrance ticket, as it were, to a *quasi* close corporation, whose justification for existence has no better foundation than that of the private opinion of its jealous members? I can see neither wrong nor harm in the thing that I suggest. A medical man may, with the consent of all, call himself "surgeon" or "physician." What wrong can there be in adding to the name a descriptive phrase to indicate the special branch he wishes to pursue? The supposed objection would seem to be ridiculous and I for one, until a sounder reason than any I know of be brought forward, must refuse to accept it. And if, then, a young man, qualified by the schools and the hospitals, may claim this privilege, what should hinder the claim of an old man, qualified by a life's experience in addition to the other?

Will you, Sirs, or will any others tell me if I am wrong, and show me the fallacy of my argument? or, failing to do that, will you or they give me the advantage of your or their support?

I am, Sirs, yours faithfully,

A. Z.

*** "A. Z.'s" excellent letter contains amidst its plenitude of truth some faults in argument—at least, that is our view. To comment upon the letter at once might be to stifle the discussion which he seeks, and which would, we think, be valuable. We should like to hear other professional opinions. —ED. L.

THE MEAT OF THE PEOPLE.

To the Editors of THE LANCET.

SIRS,—Your annotation in THE LANCET of July 14th on "The Meat of the People" is well timed and well worthy of the serious consideration of all who are interested in the physical well-being of the race. I have had opportunities within the last few years of studying the question somewhat fully and the conclusion I have arrived at is that, however savoury well-cooked foreign meat may be, its *nutritional value* is very low in proportion to the price charged for it, especially when it is palmed off on the public, as it unquestionably frequently is, as fresh English meat.

I have seen in different parts of New Zealand the whole process of preparation of mutton and lamb for the English market and I have nothing but admiration for the eager watchfulness and care with which the process is carried out in that colony. Here there is no question of suspicion as to cleanliness or purity or careless inspection. It is a question of comparative nutritive value of the meat when placed on the table.

I venture, in the first place, to doubt whether the quality of the mutton when fresh is equal to that of home-fed mutton. I know that much of the grass is grown from English seed. But it has not the same appearance as English grass. It looks ranker and coarser, as if it had grown to quantity rather than quality and to be deficient in chlorophyll, whatever that may imply.

Secondly, and of this I am convinced, the freezing process of itself greatly diminishes the nutritive value of the meat and renders its fibre less digestible. Whether this process acts in this way continuously during the long period of transit to this country I am unable to say, but I think it is quite possible.

Thirdly, I believe the further diminution in nutritive value during the process of thawing to be enormous and that this process is not properly understood and seldom properly carried out.

Lastly, it is well known that even the best home-bred and fed mutton loses considerably and inevitably in nutritional value in the process of cooking, however skilfully this may be performed. I think that in the case of meat which has been frozen, perhaps for months, and thawed in a few hours the nutritional loss sustained in the cooking process is likely to be proportionately much greater.

I therefore believe that by the time the meat reaches the table its value as nutriment is low as compared with that of fresh English mutton and does not represent the value at which it is sold.

It is all very well to be told, as we so often are, that when placed on the table well cooked you cannot tell New Zealand from English mutton and that some people prefer it to English mutton. This does not affect the difference between the two as nutriment; and it is only true when the joints are hot.

As I believe the New Zealand mutton and lamb is the best and the most carefully supervised form in which our imported meat-supply arrives I will not touch upon the other sources. But I think it should be regarded as a very serious offence when consumers are charged the value of fresh English mutton for what is, I believe, a far less wholesome and less nutritious article.

I am, Sirs, yours faithfully,

PERIPATETICUS.

PROFESSOR AUGUST FOREL ON THE SEXUAL PROBLEM.

(FROM A CORRESPONDENT.)

THE Hungarian National Defence League against the spread of sexual diseases, conjointly with the "Good Templar" Order, recently held a meeting of considerable interest in Budapest.

Professor August Forel was invited to deliver an address and to enlighten the public on the hygiene and ethics of sexual life. In Hungary, where syphilis and other venereal diseases cause immense harm and distress, the medical profession welcomes every movement which may have the effect of diminishing this scourge. The town-hall, where the address was delivered, was crowded with people of all ranks and occupations who paid the greatest attention to all that was said.

Professor Forel was introduced by Dr. Leo Liebermann, professor of hygiene and public health at the University of Budapest. In the early part of his address he explained the idea of ethics. He endeavoured to prove the evolution of ethical feelings on a natural basis, tracing them back to the remote period when the instinct of preservation of the species formed the only link between human beings. The field within which affection might exist at first included only individual males and females but it was gradually enlarged until it

included families and culminated in the true ethics of humanity, the modern sentiment of love uniting the whole human race. It was a generally accepted opinion that family affection was a distinctively human characteristic but this he considered to be no more than an exhibition of human self-conceit. The lower animals showed obvious examples of family affection and among them parrots, monkeys, and swallows stood on the highest pinnacle of domestic faithfulness.

Professor Forel then went on to say that in the human species it was altogether at variance with ethical principles that the male sex should make use of its superior strength to oppress the female sex. Only education could help in developing the ethical feelings—that education which taught men to keep their lower instincts in check. Temperance in appeasing every need was not by any means the same thing as leading an ascetic life. The greatest difficulty of ethical life was that the results of deeds inspired by ethical feelings were not in harmony and in proportion with the intention. Therefore the art of real ethical education consisted in making motives and deeds harmonise. Professor Forel declared egotism to be an anti-ethical feeling according to the actually accepted sense but he emphasised the fact that in their true sense egotism and altruism were not opposed to one another and that both were necessary. He said that laws were necessary evils; they were, however, indispensable for keeping our passionate inclinations in check. These inclinations we inherited with our nature. The more evolved and developed mankind became the less need there was of laws.

Speaking of sexual ethics, Professor Forel alluded to the Malthusian system, which experience had proved to be impracticable and, in fact, it could not be otherwise, for it did not take account of human nature and was simply a propaganda of abstinence. He rejected also the views advocated by Tolstoy who began to proclaim the benefits of continence at an age when, owing to his advanced years, he was already beyond temptation. The artificial prevention of conception was, however, an ethical duty in all cases in which the woman could not regain her strength after her first labour and in which married couples were the subject of bodily or mental deficiency. Professor Forel did not recommend the prohibition of child-bearing but only its regulation. Healthy, intelligent women ought, he said, to bring forth many children at proper intervals. He vehemently denounced the social injustice with which illegitimate children were treated and he demanded for them an entire equality of rights. He also spoke very severely of the terrible negligence which allowed girls to enter the state of matrimony without having previously been enlightened. He sharply criticised the existing system of prostitution and the so-called *mariages de convenance* and said that only stupidity could prevent the enlightenment of children in sexual matters.

Coming to the hygiene of sexual life Professor Forel demonstrated that ethics were here in complete agreement with hygienic laws. Everything that the ethics of sexual life claimed was at the same time hygienic. He referred to the dangers of alcohol, which were well shown by the fact that most insane people and bodily and mentally deficient children were descended from intemperate parents. Such children have usually been conceived after the consumption of alcoholic beverages. The State organisation of prostitution did not deter young men from resorting to prostitutes and rather had the effect of inducing them to do so. It therefore ought to be discontinued and marriage ought to be encouraged among young men. Men ought not to defer marriage until they had earned enough to live luxuriously and to give parties and entertainments but they ought to marry while they could love their wives with the fervour of early manhood.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

The Report of the Medical Officer of Health for 1905.

Dr. E. W. Hope's report on the health of Liverpool during the year 1905 possesses many points of great interest. Dealing with the large amount of infantile mortality, he states that the loss of infant life in the various districts of the city varied widely, the range during the year being from 84 per 1000 in the district where it was the lowest up to 240 per 1000 in the district where it was the highest. Even in the lowest the death-rate of infants was more than four times as high as the general death-rate of the community. Zymotic diseases accounted for 899 deaths, the great majority of them—viz., 681—being due to diarrhœa, the exciting cause being, no doubt, the same as that in the case of atrophy—viz., improper feeding. Following upon this comes whooping-cough with 60 death and measles with 59 deaths. Under the heading of diseases of the digestive system no less than 267 deaths of infants are recorded; 677 deaths of infants were due to diseases of the respiratory system and 496 deaths to diseases of the nervous system. The natural guardian of the infant is the mother and it is only with extreme caution that the efforts of the municipality can be specially directed to the preservation of infant life, but such efforts have been made in a variety of ways. Hospital provision is now available for infants suffering from whooping-cough and measles where they can be received, together with the mother if necessary. With regard to feeding there is strong evidence that the efforts of the health committee in widely circulating instructions as to the feeding of infants, in employing a large staff to give verbal instructions and to supervise, in establishing sterilised milk depôts at which milk specially prepared for infants can be obtained, and in improving the general sanitation of slums have resulted in marked benefit. Dr. Hope alludes to the good results which have followed from the voluntary notification of cases of pulmonary tuberculosis since February, 1901, when the system came into operation. A special form upon which the notification can be made has been circulated among medical men and in those cases in which the requirements of the health committee have been fulfilled the usual notification fee has been paid. During the year 1905, 1971 cases of pulmonary tuberculosis were reported, of which 110 were duplicates, leaving a total of 1861 cases reported. The deaths from the disease totalled 1245; in 614 instances the rooms and bedding were disinfected and in 64 cases the bedding, &c., were removed for special disinfection in the apparatus for that purpose. Out of the 1861 cases reported 1257 were males. The birth-rate of Liverpool is still the highest in the country, thus raising uniformly the crude death-rate. The death-rate, 19·2 per 1000, was at a point indicative of great health improvement—the lowest ever recorded. Last year six importations of small-pox had to be dealt with—isolation, revaccination, disinfection, and domiciliary visitation for defined periods being among the expedients for the protection of others. There were 325 cases of typhoid fever reported during the year, as against 434 in the preceding year, and 681 in 1903. The deaths from the disease were 49, being 33 fewer than in the preceding year. Those figures represent the lowest recorded since the extension of the city boundaries in 1895.

The Royal Infirmary and Summer Diarrhœa in Children.

The committee of the Royal Infirmary has fallen in with the wishes of the corporation to set apart a ward in the infirmary for the exclusive treatment of children suffering from summer diarrhœa. A ward containing 20 beds has been fully equipped for the purpose in the large recreation room, the expenses of which will be borne by the municipality. It will be interesting to ascertain the causes of the diarrhœa in infants now so prevalent in Liverpool, and every endeavour has been made by the health authorities of the city to cope with the disease. The ward will be in use during the present epidemic.

Liverpool Convalescent Institution.

The Lord Mayor of Liverpool presided over the thirty-second annual meeting of the subscribers in the Gladstone Hall of the institution, at Woolton, on July 14th. The report of the council shows that 2732 patients were admitted during the year 1905. The increase in the number of patients is to a large extent the result of the system of nomination and recommendation forms, by which subscribers and donors are entitled to recommend patients for admission, either on payment of the nominal sum of 5*s.* per week, or without charge, in proportion to the amount of their contribution. By this coöperative system benefactors are brought into more intimate touch with the working and administration of the institution and their interest is maintained. By the liberality of Miss Winslow and Messrs. Walker of Litherland, two more free beds have been added, making, with the sums received from new subscribers, a net increase during the year of £65 in annual subscriptions, the total amount under this head being now £1122. The sums received from,

or on behalf of, patients towards their own maintenance amounted to £1606. The special donations received during the year were as follows: Hospital Sunday and Saturday Fund, £368 15s.; Mr. Arthur Earle, £330, "In Memoriam Elizabeth Earle"; whilst other special donations amounted to £155 10s. The expenditure incurred in laying out the fields is now fully justified by the improvement in the general appearance of the grounds and also in affording increased facilities to patients for open-air exercise. The fourth closed shelter completed this year has proved an additional attraction for patients.

July 24th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

Cardiff and Swansea Hospitals.

THE complete report of the Cardiff Infirmary for the year 1905 shows that the economical management which has characterised this institution in former years has been maintained. The average weekly cost per patient was £1 4s. 8d., or about 3d. per week less than in 1904. The average cost per occupied bed was £64 5s. 4d., a sum which compares favourably with that expended in the Swansea Hospital during the year ending May 31st last—namely, £71 19s. It is only fair to state that the cost per bed in Swansea in the previous year was only £63 12s., and the total income in the year just ended fell short of the total expenditure by only £183, whereas the Cardiff expenditure exceeded the income by £2312. The more favourable financial position of the Swansea institution appears to be almost entirely due to the larger proportionate amount contributed by the workpeople of the district as compared with Cardiff. The total income in Swansea was £8265 and the workpeople subscribed £3519, or 42 per cent. In Cardiff the total income was £11,725 and the workpeople's contribution was £3584, or 30 per cent. of the whole. If the Cardiff workpeople had contributed in the same proportion as their comrades in Swansea there would have been a balance on the right side of nearly £100 on the year's working of the Cardiff institution. Although a great deal has been done during the past few years in the way of remodelling the wards and the administrative quarters of the Cardiff Infirmary nothing has been done to improve the out-patient department with the exception of the erection of casualty rooms. It is estimated that a sum of £7000 should be spent on this department if it is to fulfil the requirements of the present day. Early in the year an anonymous donor offered £1000 towards this amount, provided the remainder were forthcoming from other sources before the end of the year. It is gratifying to find that there are now only £2000 to be subscribed towards the sum named.

Infantile Mortality in Cardiff, Swansea, and Rhondda.

The statistical table relating to infantile mortality which is now included in the annual reports of medical officers of health enables a detailed comparison to be made of the number of deaths of young children in different localities. In 1905 the infantile mortality rate in Cardiff was 118 per 1000 births, in Swansea 130 per 1000, and in the Rhondda 199 per 1000. The Rhondda rate was about equal to that which has been recorded during the previous ten years and was higher than that in any of the 75 great towns of England and Wales. It is of interest to find that the proportion of deaths at varying age periods was practically the same in the three towns. In Cardiff 27 per cent. of the children died under a month old, in Swansea 28 per cent., and in the Rhondda 26 per cent. Under six months old there died in Cardiff 63 per cent., in Swansea 71 per cent., and in the Rhondda 68 per cent. When the causes of death are compared there is, however, a much greater disparity. Premature birth was recorded as the cause of death in 12 per cent. of the Cardiff children, in 10 per cent. of those in Swansea, and in only 7 per cent. of those in the Rhondda. Tuberculous diseases were responsible for 6 per cent. of the Cardiff deaths, 4 per cent. of those in Swansea, and 3 per cent. of those in the Rhondda. Diarrhœal diseases caused 14 per cent. of the Cardiff, 10 per cent. of the Swansea, and 20 per cent. of the Rhondda deaths. In connexion with this last group Dr. J. D. Jenkins states that no measures directed specially towards their prevention have been carried out in the Rhondda with the exception of the distribution, through the medium of one of the registrars of deaths, of cards containing a number of hints drawn up both in English and in Welsh for the guidance of mothers in the feeding and general management of their babies. This distribution has been going on for four years and it is now possible to compare the diarrhœal death-rate during those years with that which prevailed previously. As the cards were distributed in only a portion of the district and to the mothers of four-fifths (about 3600) of the children born in the whole of the Rhondda it is also possible to compare the results during the same years in the card-distributed area with those in the district where no cards were given. In 1905 the infantile diarrhœa death-rate was 33 per 1000 births in the "card district" and 50 per 1000 in the rest of the sanitary area, compared with 74 and 58 respectively in 1901 when no cards were distributed. The fall in the "card district" is thus very noticeable. It should be stated that the division of the two districts is a purely arbitrary one. The inhabitants of each are of the same class of life, living in similarly built houses the sanitary arrangements of which are almost identical and with the wage-earner bringing home about the same amount of money. These results as recorded by Dr. Jenkins are a strong argument in favour of his plea for the appointment of one or more women inspectors who by visiting the homes of the people could point out the pitfalls to be avoided and the best measures to adopt in order to assist in the upbringing of healthy and well-grown children.

The Dolgelly Urban Council and Isolation.

The question of providing an isolation hospital for the urban and rural districts of Dolgelly, in North Wales, was further discussed at meetings of the urban and rural councils held on July 20th and 21st. Since the previous meetings of these councils, mentioned in THE LANCET of June 23rd, p. 1791, there have been 16 fresh cases of scarlet fever notified in the urban district and one death occurred in a small cottage where there were four cases of the disease and where any kind of isolation was impracticable. Two deputations, representing the district nursing association and Dr. Williams's Endowed School for Girls, attended before the urban council and urged it to proceed with the erection of an isolation hospital, a free gift of land for which purpose has been offered. A petition to the same effect, signed by 300 residents, was also handed in. Reference was made to the pecuniary loss caused by the outbreak of infectious disease in towns that laid themselves out as visitors' resorts like Dolgelly, and on behalf of the school it was pointed out that they would be incurring a great danger if it was rendered unsafe for the boarders from various parts of England and Wales to be together with the day pupils from the district. At a previous meeting of the rural council it was decided to accept the offer of a free gift of land and to proceed with the erection of a hospital at a cost not exceeding £500, provided that the urban council contributed two-thirds of the cost, the rural council to contribute one-third. The urban council after a discussion lasting for two hours accepted those terms but only on the casting vote of the chairman. The rural council met the following morning and after further considering the matter decided to take no further action until the views of the various parishes were obtained. It was stated that 90 per cent. of the rural population were opposed to the movement as it would increase the burden of the rates.

Monmouthshire Water-supply.

The example set by the county council of Glamorgan in its endeavour to secure for the inhabitants the county watersheds is being followed by the Monmouthshire council. The county surveyor has presented a report dealing with the available supplies in the county and at a conference held on July 18th between representatives of the council and of the local sanitary authorities a proposition was unanimously passed expressing the opinion that it was desirable to conserve the present sources of water-supply and to take steps to prevent outside companies and bodies from extracting water to which the inhabitants of the county have a natural claim. The county council was asked to promote a Bill in the next session of Parliament having these ends in view. Monmouthshire has an area about two-thirds that of Glamorgan and a population in the administrative county of only about one-third but a very large extent of the Monmouthshire coalfields is still unworked, so that a great increase in the population is probable during the next 20 years when the eastern and western valleys of Monmouthshire will be as densely populated as

the Rhondda and Aberdare valleys in Glamorgan are at the present time.

Physical Degeneration Posters in Bath.

The health committee of the corporation of Bath has instructed the medical officer of health (Dr. W. H. Symons) to draw up a poster setting out the extent to which physical deterioration is due to the excessive use of alcohol.

July 23rd.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Notification of Pulmonary Tuberculosis and Measles in Edinburgh.

AT a meeting of the public health committee of the Edinburgh town council held this week it was agreed to recommend to the town council that the compulsory notification of pulmonary tuberculosis should be adopted. It was also agreed to recommend the voluntary notification of the first case of measles occurring in a family within a period of two months—that is to say, that after the lapse of two months a case occurring is to be reckoned a first case. At the same meeting it was intimated that since the opening of the wards in the city hospital for the reception of cases of pulmonary tuberculosis 47 cases had been admitted. 14 of the patients had died after a residence of from two days to 11 weeks. The average cost was 11½*d.* per day per patient.

The Presentation to Sir Henry D. Littlejohn.

As has already been mentioned in THE LANCET, the presentation to Sir Henry D. Littlejohn is to take the form of his portrait by a leading artist. Subscribers to the testimonial would facilitate arrangements if they would send their contributions to Mr. R. N. Ramsay, Bank of Scotland, Forrest-road, Edinburgh, who is acting as treasurer.

Graduation Ceremony at the University of Glasgow.

On July 17th in the Bute Hall the summer graduation ceremony took place at the University of Glasgow. As is usually the case at this midsummer function, all the graduates were candidates for medical degrees. The degree of M.D. was conferred on seven Bachelors of Medicine, "with commendation" in one case. One student received the degree of M.B., C.M., having started his course under the old regulations, and 63 graduated M.B., Ch.B., of whom two obtained their degrees "with honours." The proportion of ladies among the graduates was much as usual, one lady appearing among those who graduated as Doctors of Medicine and five among those who graduated as Bachelors. At the close of the ceremony Professor John G. McKendrick, who is retiring from the chair of physiology, addressed the graduates. He first touched upon the great development which had taken place within recent years in universities and more especially in connexion with their own University. In dealing with the progress that had been made in medicine and surgery he said that it seemed to him that we were even now on the road to great discoveries that might, as regards some details of practice, revolutionise the medical art. It was becoming more and more apparent that physiology, pathology, and pharmacology were closely connected and on knowledge derived from these practical medicine was based. He therefore urged those who had just graduated to preserve their knowledge of these three sciences, to link them together, and they would find that each would help and illuminate the other.

Arbroath Infirmary.

At the annual meeting of the directors of, and subscribers to, the Arbroath Infirmary attention was drawn to the fact that a person suffering from pulmonary tuberculosis had recently been admitted to the convalescent home. The meeting accordingly resolved that in the case of granting certificates for admission to the home all medical practitioners should make a thorough examination to satisfy themselves in a given case that the patient was not suffering from pulmonary tuberculosis. As regards the finances of the hospital, although the balance is on the wrong side the deficit is very small. The total revenue for the year was £1178 4*s.* 11*d.* and the expenditure, including expenses connected with the convalescent home, amounted to £1194 10*s.*

July 22nd.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Efforts to Check Tuberculosis in Dublin.

AT a meeting of the rural district council of the South Dublin union held on July 18th Mr. D. Edgar Flinn, medical inspector of the Local Government Board, suggested that the council should join with the corporation of Dublin and the various public bodies in the county in establishing a sanatorium for the whole of the city and county. The death-rate in Dublin from consumption, he stated, was over 3 per 1000 of the population, while in Belgium and other countries where sanatoriums had been established for grappling with the disease in its early stages the death-rate had been reduced to 1 per 1000. The following motion was adopted by the council:—

That we, the South Dublin rural district council, hereby call on the corporation and the various rural and urban districts of county Dublin to appoint representatives to form a deputation to wait on the Chief Secretary with a view to obtaining a Government grant towards the cost of a sanatorium for consumptives.

Post-Graduate Study in Dublin.

Arrangements have been made by the ten general hospitals in Dublin as well as the various hospitals devoted to special subjects, with the sanction of the President and Council of the Royal College of Surgeons in Ireland, for the holding of two courses of post-graduate study annually during the months of June and September. Each course will last for three weeks and will render the whole of the clinical material in the city available for post-graduate instruction. The various subjects are classified under the headings of medicine; surgery; diseases of children; diseases of the skin, of the eye, and of the throat, nose, and ear; gynæcology; therapeutic applications of the x rays and of light; pathology and bacteriology; lunacy; operations on the dead body; anatomy; and sanitary science. The next course will extend from Sept. 24th to Oct. 13th. A fee of 5 guineas will be charged for each course and will entitle the holder to participate in every section of the course. The instruction given will be as practical and as helpful to the varying needs of the practitioner as possible. Further information can be obtained from, and applications are to be addressed to, Professor A. Fraser at the Royal College of Surgeons, Dublin.

Tuberculosis in Cattle.

At a meeting of the committee appointed to inquire into the working of the Department of Agriculture and Technical Instruction held in Belfast on July 17th Mr. R. T. Huston, a veterinary surgeon, who is secretary of the county Armagh Committee of Agriculture and who has had, perhaps, unique experience in reference to the prevalence of tuberculosis in cattle, said that during the past eight years he had tested hundreds of cattle. Since Jan. 1st, 1905, up to the date of the meeting he had had submitted 213 animals to the tuberculin test and 164 failed to withstand the ordeal, while four were doubtful. In other words, one-quarter of the cattle in Ireland were tuberculous. He had no doubt about that and he had no doubt about the test. All diseases should be scheduled. He believed that at the present time children in Ireland were being fed largely on milk swarming with the bacilli of tuberculosis, and in his opinion it was no wonder that the death-rate was high. Mr. Huston's figures showing that one-fourth of the cattle in Ireland are tuberculous, as given before this committee, are much higher than the findings of Geddes, who in 1901–02 was sent by the American Government to examine by means of tuberculin some of the chief breeds of British dairy cattle and who reported in the Nineteenth Annual Report of the Bureau of Animal Industry, 1902 (p. 551), that of 1551 animals tested of all breeds 230, or 14·77 per cent., were rejected. The highest rejections were among the Jersey strain (54·76 per cent.), then came the Aberdeen Angus (28·73 per cent.), then the Ayrshire (24·24 per cent.), then the shorthorn (23·25 per cent.), while in the Dexter-Kerry, Guernsey (on Island), and the Sussex there were no rejections at all.

Presentation to Mr. C. K. Darnell of Bangor, County Down.

At a meeting held in the Medical Institute, Belfast, on July 17th, Mr. C. K. Darnell of Bangor was presented with an address, a piece of silver plate, and a cheque for 300 guineas from a large number of his medical brethren. Dr. J. W. Browne, who presided, having referred

to the trying time through which Mr. Darnell had passed[1] and to the universal sympathy felt for him by his medical brethren, called upon Dr. W. Calwell (President of the Ulster Medical Society) who conveyed to Mr. Darnell the deep and warm sympathy, not only of the members of his society, but also of numerous medical men throughout the United Kingdom, who had joined in that presentation. He claimed for Mr. Darnell that he had "exercised a reasonable degree of care and skill"; also honesty of purpose and uprightness of conduct, which seemed to his professional brethren to entitle him to a verdict. It was only the absolutely prohibitive expense that prevented the case from being carried to the House of Lords. Dr. Cecil E. Shaw (secretary to the Ulster branch of the British Medical Association) read the address, to which Mr. Darnell having replied, the chairman made the presentation. A vote of thanks to the chairman, moved by Dr. John Campbell, terminated the proceedings. Letters of apology were read from the following subscribers to the presentation who were unable to be present: Sir William Whitla, Professor J. W. Byers, Mr. J. G. Jefferson (Lisburn), Dr. J. M. Kilen (Larne), Mr. J. Rowan (Gargary), Mr. H. Buchanan Murray, Dr. Cathcart, Dr. J. S. Morrow, Mr. T. C. Nelson, and Mr. H. T. A. Warnock (Donegal).

Bangor Nursing Society.

At the annual meeting of the Bangor Nursing Society held on July 19th, the Dowager Marchioness of Dufferin presiding, Professor Byers gave an address on Infantile Mortality and Consumption, pointing out the aid which nursing societies might give in the solution of such pressing health problems. At the conclusion of the address Lady Dufferin expressed her appreciation of Professor Byers's address and her thanks to him for coming to Bangor to help their nursing association.

Visitation of the Royal University of Ireland.

Sir William Anson, Bart., M.P., and the Right Hon. Sir A. M. Porter, Bart., Master of the Rolls, held in Dublin, by command of the King, a special visitation of the Royal University of Ireland on July 20th for the purpose of inquiring into the relations between the University and the Queen's Colleges, and to solve the doubt which had arisen as to the meaning to be applied to certain words in the Act of Parliament as to the holding of prizes, scholarships, exhibitions, or Fellowships, or other emoluments by students of the University. The object of the visitation was to determine a legal point raised in the University which affected a number of the students in the three Queen's Colleges of Belfast, Cork, and Galway. It depended on the proper construction of the University Education (Ireland) Act (1879), Section 9, Subsection 4, which provides that "no student holding any exhibition, scholarship, fellowship, or other similar prize in any other university, or in any college attached to a university, or in any college endowed with public money, shall hold any of the said exhibitions, scholarships, fellowships, or other prizes in the university, to be created by the said charter, without taking the value of such previous exhibition, scholarship, fellowship, or other similar prize into account." By some it was argued that under this section a student who obtained a scholarship of, say, £20 value, at any of the Queen's Colleges and within the 12 months gained an exhibition of £40 in the Royal University, will only be entitled to receive the difference between the two amounts from the Royal University as "the value of the previous scholarship must be taken into account." On the other hand, it was argued that having once received the emoluments connected with the Queen's College scholarship the student had ceased to hold it, and did not come under the operation of the statute. If the first view had been established the holders of the many valuable scholarships in connexion with the Queen's Colleges of Belfast, Cork, and Galway would have been disentitled during the year after winning such to obtain money prizes in the Royal University without deduction, or might even receive nothing in some cases. It also meant, what was admittedly unfair, that scholarships provided by private individuals in the Queen's Colleges—who wished to encourage education—should be treated as if they were scholarships founded by public money. It was contended that it was unfair that the amount of one of these scholarships awarded to a student should be appropriated by the Royal University in the event of that student passing an examination and gaining a scholarship in the Royal University. It was, on the one hand, contended on behalf of University College, Dublin, which it was said had no public endowment, that the proper construction of Subsection 4 was one that would prevent concurrent endowments. On the other hand, it was shown that University College had 15 professors, each receiving £400 a year salary and £6000 for its arts course from the Government, whereas the arts endowment to each of the Queen's Colleges was £2638 a year and all the time University College was entirely free from all the exemptions proposed to be put in force in the case of the Queen's Colleges, while in reality it was a Government endowed College. The visitors decided (and against their decision there is no appeal) that a Queen's College student was not disqualified from holding an exhibition in the Royal University because he holds a Queen's College prize. The matter has from time to time occasioned discussions in the Senate and has aroused much unpleasant feeling among the representatives of the institutions concerned; it is therefore hoped that after this authoritative and final decision the matter will be allowed to drop.

July 24th.

[1] Vide THE LANCET, vol. i., 1906, pp. 925, 999, 1213, 1284.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Malaria and Yellow Fever in Senegal.

ON July 10th M. Kermorgan read a paper before the Academy of Medicine in which he related the good results obtained by the Dakar and St. Louis Railway Company in its efforts to protect its servants against malaria and yellow fever. The improvement in the morbidity conditions was remarkable. At St Louis for the year 1902–03, before the protection of buildings by metallic gauze shutters, ten railway servants spent 139 days in hospital and were also off work for 44 days. In the year 1904–05, after the instalment of such shutters, the number of days in hospital fell to 13, while the men who were off work without going to hospital numbered only two who were off work for 13 days between them. Similar figures were reported from other stations.

Serious Insanitary Conditions in Madagascar.

At the same meeting of the same society Professor Blanchard gave a most serious account of the widespread and fatal prevalence of malaria in Madagascar. Tananarivo is considered the most healthy place in the island on account of its elevated situation. In 1900 the number of deaths from malaria was 48, in 1903 it was 137, in 1904 the number was 277, in 1905 it had risen to 686, and for the first four months alone of 1906 the deaths had mounted to 980. The population of the town is only 40,000. Professor Blanchard had studied the causes of the outbreak with great care and he had arrived at the conclusion that the primary cause lay in the works for the construction of a road and a railway from Tananarivo to the coast. These works have been the cause of bringing down the Hovas from the healthy plateaux which they formerly inhabited, and where they have up to now been free from malaria, to the low-lying coast lands. Here there are two important species of mosquito—pyretophorus costalis and myzomyia funestis—which are carriers of the malaria parasite. As the railway and road are pushed further into the interior the mosquitoes travel with the gangs of navvies and as a consequence the fever also. A similar phenomenon has been observed in Mexico where yellow fever, which was formerly confined to Vera Cruz, crept along stage by stage to the city of Mexico when the railway which unites the two towns was laid down. In the case of Madagascar it is to be hoped that measures of destruction will be taken against the mosquitoes and also that the use of quinine will be insisted upon, for these two methods are the best for combating the malaria scourge.

A New Chair in the University of Paris.

On the motion of M. Roussel the Municipal Council of Paris has just decided to recommend the creation in the Faculty of Medicine of a chair of oto-rhino-laryngology.

A Case of Bubonic Plague.

On July 3rd a sailor at Havre was suddenly attacked by acute colic and nausea and being unable to work went home. In the evening of the same day, as he had become worse, a medical man was sent for who prescribed a certain course of treatment. Next day a hospital physician was called in and saw the patient twice. At his second visit he was able definitely to ascertain the presence of enlarged glands in the patient's groin and that also he showed other symptoms of

plague. Three other medical men who were called in consultation confirmed the diagnosis but the patient died. Fluid was taken from the bubo which on being examined also confirmed the opinion of the medical men. Strict hygienic measures were promptly taken by the Mayor of Havre. The rooms occupied by the deceased were turned out, disinfected, and washed down with a solution of perchloride of mercury and all the belongings of the patient were burned.

Radium in Gynæcology.

On July 2nd M. Oudin and M. Verchere communicated to the Academy of Sciences the results of some experiments upon the above subject. A glass tube containing two centigrammes of pure radium bromide was inclosed in a uterine sound made of aluminium. This was passed into the cavity of the uterus and was left there for from ten to 15 minutes without any harm resulting. In two patients suffering from uterine fibroids accompanied by severe hæmorrhages the bleeding, which before the treatment had been almost continuous for many months, was entirely controlled. This effect was only to be expected in view of the well-known vaso-obliterative action of radium. Further, the microbicidal action of the radium brought about rapid and complete cure in various cases of long-standing catarrhal metritis and greatly improved chronic cases of gonorrhœal urethritis.

A New Dispensary for the Tuberculous.

A new dispensary has just been called into being on the initiative of Dr. Héricourt, medical inspector of posts and telegraphs. The object of this dispensary is to facilitate compulsory hospital treatment for tuberculous employees in this department who are only too many in number.

Chloroform Hallucinations.

A singular action for divorce has just been settled by the Tribunal of the Seine. The wife of a medical man wished to divorce her husband. She said that one day her husband went to a friend's house to operate upon the friend's nurse. When the girl awoke from the anæsthetic she said that she had seen the medical man embracing her mistress. In defence the medical man called Dr. Brouardel and Dr. Debove who both said that patients under an anæsthetic were very wont to develop hallucinations which endured after they woke up. The court agreed with this evidence and threw out the wife's pleadings on these grounds. Other indisputable evidence was, however, brought and the wife of the medical man was granted her divorce.

The Transmission of Infectious Diseases by Domestic Animals.

M. Remlinger and M. Osman Nouri, at a meeting of the Hospitals Medical Society held on June 20th, gave an account of the following case of infection. The case occurred in a family in which hygienic precautions were duly observed. The family returned to town from their country seat because scarlet fever had broken out in the neighbourhood. Some days later one of the daughters, aged 16 years, showed all the symptoms of a mild attack of scarlet fever. She was isolated and the disease ran its usual course. On the twentieth day of the illness a younger sister returned home and the strictest precautions were taken to prevent her catching the infection from her sister. 12 days after the return of the younger sister she sickened with scarlet fever. The attack was mild and the patient recovered without any complications. Every care had been taken to prevent any servant who attended on the elder sister from having anything to do with the younger one and nothing that the elder used was also used by the younger. The infection in the case of this latter patient was, however, traced to the cat which had been in contact with both patients.

July 24th.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Italian Coöperation at the Recent International Meeting of the Red Cross at Geneva.

THE Geneva Convention for the relief and care of the sick and wounded in war has always had special interest for Italians who even go so far as to claim priority in the conception of the philanthropic movement, though conceding, of course, that the Swiss were the first to "put it on wheels." Italy was therefore exceptionally well represented at the recent Conference of the coöperating parties to the Convention—a Conference held at Geneva in the historic "Alabama" Hall of the Hôtel de Ville and marking, on its dissolution a few days ago, a distinct advance on the programme agreed to by its predecessors. The Federal Council had compiled, on the basis of deliberations ratified at the Hague Congress, a series of questions to be examined by the Conference and these, 14 in number, dealt with the following subjects: (1) the wounded, the sick, and the dead; (2) the medico-chirurgical *personnel;* (3) the medico-chirurgical *matériel;* and (4) signals, abuses of the same, and general questions. On the motion of his Excellency M. Edouard Odier, Swiss Minister at the Court of Russia, elected by acclamation President of the Conference, these four groups of subjects were submitted to as many committees formed from the delegates of the nationalities represented, whose findings finally came up for ratification in plenary assembly. To begin with, the protection accorded by the Convention of 1864 to the sick or wounded in war without distinction of nationality was extended to all persons officially attached to the Army Medical Service; in other words, to all officially charged with picking up, transporting, and tending the sick or wounded, to the working staff of the several medico chirurgical bodies, and to the ministers of religion. To this provision, formally re-stated in terms more juridically exact than previously, exception was taken on the ground that the Geneva Convention could guarantee no real protection to the medico-chirurgical *personnel* as above defined, and a motion was introduced to exclude the said *personnel* from the Convention. An animated discussion followed, in which a powerful vindication of the provision was given by General Randone, Inspector-General in the Italian Army Medical Department, and, as a consequence, the motion was rejected well-nigh unanimously. On the important question of voluntary aid (*soccorso volontario*) the Conference came to a conclusion more precisely defined than heretofore and its terms ran thus: "We assimilate to the official *personnel*, to be under the protection of the Convention, the *personnel* of the societies of voluntary aid duly recognised and authorised by their Governments, the said *personnel* to be employed in the medico-chirurgical formations of the armies, under the reservation that it will remain subject to the military laws and regulations." Minor questions cropped up in the discussion of this provision but without affecting it substantially, one point, however, standing out with special clearness—viz., that as a direct consequence of the protection accorded by the Convention to all the *personnel* officially attached to the sick or wounded in war, the said *personnel*, if it fall into the power of the enemy, will not be treated as "prisoners of war." As to the moveable *matériel* of the Red Cross service, it was unanimously agreed that it ought to be treated differently from the permanent military hospitals belonging to the State and planted almost invariably on national territory. These last must remain subject to the laws of war, while their medical purpose will always be respected; the moveable *matériel* of the Red Cross, on the contrary, will be in all circumstances inviolable—a conclusion which, again, the experience and the arguments of General Randone powerfully reinforced. Thereafter the Marchese Maurigi, another of the Italian delegates, secured the reaffirmation of the principle already recognised at the Hague Congress that benevolent institutions maintained by such organisations as the "Opere Pie" of Italy shall be considered as private property and not come under military law. The treatment of the wounded was another question more stringently dealt with than at previous conferences, the conclusions discussed and formulated all tending to minimise the risks to the victims referred to while securing greater facilities for the emissaries of the Red Cross. As to the search for the wounded and their protection, equally with the dead, against plunder and ill-usage, the conclusion formulated sets forth that after every combat the master of the field of battle will take the necessary measures *ad hoc*. The said master will equally take upon himself the inhumation or incineration of the dead, but only after an attentive examination of their bodies. Besides, it will be his duty wherever possible to send to the authorities of their native country or army the insignia or regimental marks of identification found on the bodies and a specific statement of the condition of the sick and wounded. Finally, the regulations affecting transport, particularly "convoys of evacuation," were once more reviewed and brought into closer correspondence with respect for the sick and wounded on the one hand, and with the military law on the other, the transport service (wagons,

trucks, &c.) not being available for other than the special purposes of the Red Cross. And so the conference rose, having fulfilled its beneficent programme with a more circumspect eye to the interests of the immediate sufferers from war than was possible to its predecessors to whom the experience of later military developments was necessarily denied.

"Drowned at Sea."

One of the most brilliant graduates of the Venetian school, Dr. Antonio Dal Fabbro, who had chosen the Congo as his professional field, went down (so I have just learned from Verona) with the steamer that was conveying him to Kassai. Of his 80 fellow passengers only three saved themselves by swimming, while Dr. Antonio, though a strong swimmer, could not avail himself of his powers, having been in his cabin at the moment when the vessel struck. He was but 29 years of age and had taken the degree of Doctor of Medicine in 1899 with special honours for his thesis on "Progressive Paralysis." He subsequently settled at Banana in the Congo and remained in practice for three years. In 1904 his father, Professor Francesco Dal Fabbro, himself a distinguished consultant of the Venetian School, fell ill and Dr. Antonio returned to his native Verona to assist him. In the autumn of 1905 he went back to the Congo, where, as already stated, he met his death off Kassai. His friends and collegues have now raised a sum sufficient to endow a bed associated with his name in the wards of the "Colonie Alpine" hospital—a worthy tribute to a physician whose post graduate studies culminated in a "diploma di perfezionamento" in gynæcology and obstetrics.

The Health of the Pope.

Concerning Leo XIII. it used to be asked, "If sensational paragraphs about his health should cease to be a *locus communis* in journalism, what would the continental quidnunc do for a livelihood?" His successor, Pius X., has barely been three years in the Holy See and already he seems qualifying for a similar rôle. The other day he gave audience to a party of the faithful, when it was remarked that he had a finger bandaged. That very evening it was announced in various of the European capitals that His Holiness had had another attack of the gout—not in the knee this time. What are the facts? Some 24 hours previously he had been at his escritoire, and in the act of removing from a penholder a rather stubborn nib the latter had run into his finger just under the nail. Having washed the puncture and dressed it himself without disturbing anyone His Holiness next morning had a visit from Dr. Lapponi, who undid the dressing, re-washed the wound, and then re-bandaged it *secundum artem*. So much for the "fresh attack of gout—this time in the hand!"

July 22nd.

VIENNA.

(FROM OUR OWN CORRESPONDENT.)

Rupture of an Aneurysm of the Aorta into the Vena Cava.

AT a recent meeting of the Medical Society Dr. Herz showed a man giving a history to the effect that he suddenly felt something give way in his breast and that the skin of his head and face became cyanotic shortly afterwards. When he was brought into hospital there was extensive œdema of the face, the upper part of the thorax, and the upper limbs, with dark-blue discolouration. The external jugular vein, although not distended, was well filled and had a rhythmical systolic pulsation; on the right side of the sternum there was a prominence in which pulsation appeared now and then. In this region there was a triangular space where a loud high-pitched whistling sound was audible. Under digitalis the œdematous swellings were reduced in size. The diagnosis of rupture of an aortic aneurysm into the vena cava was proved to be correct by the necropsy which took place just a day before the next meeting of the society and Dr. Herz was able to show the aneurysm at the meeting. The cyanosis and the whistling noise, together with the symptoms of pressure and pulsating veins, have been present in all cases of a similar type reported hitherto.

Cancer Research.

In order to obtain as full information as possible on the mode of propagation of cancer, its distribution amongst the population of certain districts, its occurrence in the successive occupants of certain houses, the possibility of infection, and the alleged increase in the number and malignancy of the cases a collective investigation by all medical practitioners has been arranged, and the instructions which are to be sent out to all members of the profession throughout the Austrian empire have been got ready. An attempt will be made to show separately the different groups of organs attacked by the disease by appealing to the general practitioners as well as to the specialists, but a novel feature will be an endeavour to prevent a multiple notification of the same case by the family practitioner, the specialist, and possibly the surgeons and other medical men who might be consulted before an operation takes place. Medical men will be requested to ask the patients whether they have been already examined, and if so by whom, and to supply these data, together with the name of the patient, to the central committee. This will, of course, greatly increase the labour of tabulating the returns, as the names of both the previous medical attendants and the patients will have to be looked up several times in the register but the gain in the accuracy of the figures which will be obtained in this way will be well worth the extra expenditure of time and trouble. Both medical men and veterinary surgeons are also invited to give attention to cases of malignant growth amongst domestic animals and cattle; valuable information on this subject might be collected but the difficulty of making post-mortem examinations on animals, and especially on animals of considerable age, is almost insuperable, whilst the results derived from slaughter-houses are not worth much because the animals killed there are comparatively young.

A Case of Wrongly Diagnosed Abdominal Pregnancy.

Pregnancy outside the genital canal is a rarity well worth recording. Therefore Dr. Lindenthal had a very attentive audience when he gave the details of such a case before the Gynæcological Society and was able to show not only the fœtus but also the anatomical preparation and the living patient who supplied the interesting abnormality. It appeared that the woman in question had been advised by her medical attendant to undergo an operation and when she came to the hospital the diagnosis of an intra-uterine pregnancy and an intra-ligamentary cyst of the left ovary was made. The examination showed a large uterus, displaced by a large cystic swelling towards the right side, but on opening the abdomen the uterus was found not pregnant although it contained a membrana decidua, one-third of an inch thick, and had hypertrophied walls. The real cause of the cyst was a living fœtus, ten inches long, and the sac in which it lay had opened up both layers of the ligamentum latum, the meso-salpinx, and the meso-rectum. With the naked eye it could be seen that the ovary and the tube had nothing to do with the sac and microscopic examination confirmed this evidence. The tube ran across the upper surface of the ligament, both its openings were free, and the lumen was pervious. The ovary was situated on the lower end of the sac, compressed into the shape of a flat plate. As regards the mode of development of abdominal pregnancy, three explanations are possible—namely: (1) re-implantation of the ovum after rupture of the tube; (2) a direct implantation of the ovum under the serosa of the parietal peritoneum; or (3) arrest of the ovum on the fimbriæ, with subsequent growth between the two layers of the peritoneal folds. Only the latter two ways are probable, according to the experience of authorities on the subject.

A Proposal to Tax Medical Prescriptions.

Endeavours are being made to increase the funds at the disposal of the medical councils and the medical provident institutions, and among the schemes which have been suggested for the purpose there is one which has deservedly found great approval. Starting from the consideration that the public derives the largest benefit from the hard work done by the medical profession the idea that the public should contribute to the funds necessary for the internal organisation and the benevolent agencies of the profession is very attractive. It has therefore been proposed that money should be raised for this purpose by affixing to each prescription every time it is made up a stamp having the value of one kreutzer (less than a farthing). The stamps would be obtained by the pharmaceutical chemists from the various medical councils and boards and it would be unlawful to dispense any prescription without such a stamp. Taking the number of practitioners in Austria at 10,000 (in reality there are many more) and estimating that each practitioner writes daily only one prescription this would bring in

at least £3000 a year. The money thus realised would be laid out on old age pensions, grants to orphans and widows, and the maintenance of certain medical institutions.

A Unique Case of Embolism of Air combined with Embolism of Septic Material.

At a recent meeting of the Medical Society Dr. Richter showed some pathological specimens obtained from a woman 22 years of age, a primipara, who after a miscarriage at the eighth month and slight septic fever suddenly became collapsed whilst partaking of food and died in a few seconds. At the post-mortem examination it was found that the right ventricle of the heart was greatly distended with gas and when it was opened under water a large number of bubbles of gas of the size of a walnut came out of it. The pulmonary artery was filled with hard greyish-red clots measuring as much as three inches by half an inch. The source of both emboli was found in the uterus, from the cavity of which a probe could be passed without encountering any resistance whatever through the site of the placenta into a vein, its path being an aperture about a quarter of an inch in diameter which led directly to the plexus uterinus and the vena cava. The last-named vessel, as well as some other veins, were filled with atmospheric air, whilst the majority were hard and contained thrombi and other septic material. The uterus was very soft, its involution was making little progress, and the cervix admitted two fingers. No doubt the exertion of sitting up had loosened the thromboscd masses in the uterine veins and had produced embolism of the pulmonary artery. When the woman sank backwards the suction produced by the uterus opening or sinking into the pelvis allowed air to enter the uterus from which it passed into the veins and ultimately into the right ventricle. In making a necropsy care must be taken that gases produced by decomposition or air entering the subclavian vein during the act of removing the sternum be not confounded with air entering the vessels or the heart during life either as a result of surgical operations or injuries or through the uterus.

July 23rd.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

Sea Baths.

IN suitable circumstances there can be nothing more refreshing and exhilarating than a bath on the magnificent shores of the Bosphorus, where the mightily heaving current is ever deep and pure and cool. Unfortunately, bath pavilions are indiscriminately erected here without taking the necessary precautions as to the hygienic conditions of the site; indeed, it often happens that a sea bath is established in the proximity of drains. I learn that the Ottoman Government has decided to remedy this unsatisfactory state of affairs and that it has given instructions to the Imperial Medical School to take all the necessary steps in order to prevent further construction of sea-bath pavilions in unsuitable or unhealthy places. The Imperial School, in conjunction with the prefecture of the city, will appoint a sanitary commission the duty of which it will be to select the proper sites on the Bosphorus, on the Sea of Marmora, and on the Golden Horn, where bath establishments should be erected. The construction of the public pavilions will receive more attention, so that they may comply, not only with the exigencies of æsthetics, but also with those of hygiene, and proper inspection of bathing towels and garments will be exacted.

The Maternity Hospital.

The Sultan has authorised the opening of a subscription for the funds necessary to construct a maternity hospital in Constantinople and has started the collection with a liberal donation.

Another Bacteriological Institute.

It has been decided to construct a bacteriological institute in connexion with the Veterinary School. The foundation-stone has already been laid last week. The Government will furnish this establishment with the necessary material and instruments for the production of diff-rent antitoxic sera. The latter will be produced in sufficiently large quantities to be able to supply the whole extent of the Ottoman Empire and to combat the various epizootics which from time to time attack the provinces, sometimes with great violence. The Minister of Agriculture, Selim Pasha Melhamé, has taken a laudable interest in the new establishment.

The Industry of Rose Essence.

It has been discovered that the distillers who are occupying themselves with the industry of rose-essence production in the vilayet of Hudavendighiar have been in the habit, up to now, of mixing with the pure essence of roses all sorts of extraneous matter. In consequence of this the industry has fallen somewhat into disrepute. The commercial authorities have therefore taken the most energetic measures to prevent further falsifications by the provincial distillers. A special commission has lately visited the distilleries of the above vilayet and has taken the necessary steps against fraudulent practices.

July 13th.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Indian Nursing Association.

THERE has been felt for many years a great want of skilled European nurses for Europeans in Northern India and an attempt made a few years ago to establish an association unfortunately fell through. The scheme has recently been taken up again and is now receiving more official support. It is proposed to provide sufficient English trained nurses in the various provinces of Northern India and Burma for all classes of Europeans. Other outlying provinces where no regular nursing organisation now exists will be included. The proposed association will be controlled by a central committee containing representatives from each province. There will also be provincial committees for local control. The fees to be charged for the services of these nurses will be on a sliding scale as it is desired to place skilled nurses at the disposal of both rich and poor at a moderate rate and commensurate with their incomes. Thirty-eight nurses with a chief lady superintendent and two lady superintendents will at first be employed. The value of this scheme can only be realised by those who know India and who have been able to recognise that many valuable lives have been lost through want of proper nursing, more especially in outlying districts. The want of trained nurses has been the cause of much suffering.

The Strike of Students in Lahore.

The remainder of the medical students on strike in Lahore have submitted unconditionally and have petitioned to be allowed to resume their studies.

Plague in the Burma High Court.

The Burma Chief Court has had to be closed in order thoroughly to be disinfected and cleaned. On June 23rd several dead rats were discovered in the record rooms behind the records and under the judges' platforms and examination has revealed the fact that the rats found have plague bacilli. The interruption of the judicial work of the courts is no small matter and the sanction of the Lieutenant-Governor had to be obtained by wire. Plague still lingers in Rangoon; in fact, the deaths are increasing in number, and a recrudescence of last year's outbreak would not be surprising.

The Plague Epidemic.

The epidemic throughout India has sunk to insignificant proportions, only 1904 deaths with 2224 seizures being reported for the week ending June 6th, more than half of which occurred in the Punjab. The mildness of the epidemic this year throughout the whole of India is remarkable and it certainly cannot be attributed in any way to the plague measures adopted. It will be remembered that in the Bombay Presidency last year a very marked amelioration occurred, only 71,000 deaths being recorded, as against nearly 300,000 in 1903. A curious feature in the figures is that the decline was greatest in those districts which had suffered most severely in past years.

The Adulteration of Opium.

It may interest pharmacologists to know with what materials opium is adulterated in India. An important case tried at Hyderabad brought out the fact that "sangzira" was mixed with opium in large quantities, that the mixed opium was soaked in linseed oil, and that finally "amul" was added. It was also admitted that "bhang" was frequently put in and gum was utilized to unite the ingredients and make them hard. Several witnesses said that strychnine and

black sand were used in addition to some of the other adulterants.

Sickness in the Andaman Islands.

The administration report concerning the penal settlement of the Andaman Islands always contains points of medical interest. These islands are not particularly healthy as dysentery, pulmonary tuberculosis, and malarial fevers claim a heavy toll. The percentage of deaths from pulmonary tuberculosis is enormous (22·27 on the total population of the islands). There were 100 deaths amongst the 14,118 prisoners. Strict segregation of phthisical cases has been recently enforced but the general prison accommodation is deficient. In the temporary thatched barracks which had to be erected only 36 square feet per man was allowed and the phthisical wards of the hospitals were overcrowded. New barracks, however, have since been constructed. Malaria caused 14,455 admissions to hospital. The anopheles mosquito flourishes in the islands but gangs have been actively employed and a great reduction of these insects has been effected. Both Megarhinus and Aedes species are found in addition.

June 29th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Hospital Affairs.

THE Salvation Army has established a new hospital in Melbourne which was formally opened by his Excellency the Governor of Victoria on May 29th. The institution is designed to take an intermediate position between public hospitals and private hospitals and nursing homes. It will take in all classes from the rich to the extremely poor, but mostly those who would simply pay the actual expenses. Apart from the medical officers all the work will be done by Salvation Army officials. A large private residence has been adapted to hospital requirements and accommodation provided for 46 patients, including maternity cases. Before the hospital was opened some difficulty arose as to its registration. According to law an application to register a private hospital by other than medical men must be made to the local municipal council, which in this instance refused to register. Then an application was received from Mr. A. Honman, who is one of the medical officers of the new establishment, to be registered by the Board of Health in respect of this hospital. He was called before the Board and asked whether the institution was not conducted by the Salvation Army. He rather evaded the question, replying that he was the *bond-fide* applicant for registration. Now the Salvation Army has applied to the Board for registration, which the board has refused, as "the Board could not be a party to any such irregular procedure as that suggested, as that would imply that the Board viewed with complacency the using of Dr. Honman as what might not altogether unfairly be characterised as a stalking horse in regard to this matter."—At a special meeting of the directors of the Royal Prince Alfred Hospital, Sydney, the report of the secretary upon the result of his investigations into hospital administration in Europe and America was considered. The following recommendations of the secretary were agreed to:—

1. The establishment within the hospital area of a Royal Prince Alfred Hospital Sunday Fund. 2. The establishment of a Ladies' Auxiliary Society to make and provide linen, &c. 3. The establishment of a hospital alliance of young people to undertake particular special duties. 4. The establishment of a collecting organisation for outside areas. 5. Application to be made to the Admiralty, through his Excellency the Governor, for a share of naval patients. 6. Reorganisation of the system of receiving casualty patients and making the casualty department an adjunct to the out-patients' department. 7. Registration of the names and diseases of all out-patients on the card system. 8. Payment by out-patients, except in extreme cases of destitution, as follows:—(*a*) 3*d.* for each supply of medicine; (*b*) 3*d.* for each new bottle supplied; and (*c*) 2*d.* for each surgical dressing. 9. Reorganisation of accommodation for the out-patient departments and the expenditure of £150 on the consulting rooms and equipment. 10. Adoption of the card system of registration for the following purposes: (*a*) registration of in-patients; (*b*) registration of out-patients and their diseases; (*c*) registration of diseases and operations; (*d*) registration of subscribers.

The following appointments to the medical staff of the Royal Prince Alfred Hospital have been made: honorary physician, Dr. G. E Rennie; honorary surgeon, Dr. Charles MacLaurin; honorary medical officer in charge of the lock department, Dr. William J. Munro; honorary medical officer in charge of medical gymnastics department, Mr. Reuter E. Roth; honorary assistant physician, Dr. J. I. C. Cosh; honorary assistant surgeon, Dr. J. Morton; honorary assistant ophthalmic surgeon, Dr. J. C. W. Halliday; and honorary assistant gynæcological surgeon, Dr. Fourness Barrington.—At a special meeting of the subscribers to the Women's Hospital, Melbourne, certain amendments in the by-laws relating to the appointment of the honorary medical staff were passed. It is now provided that the committee instead of the subscribers should elect the honorary medical staff consisting of 12 officers. In addition to the 12 honorary medical officers appointed the committee was to have discretion to appoint as a member of the staff *ex-officio* the lecturer on obstetrics at the University of Melbourne. With the exception of this officer, whose appointment was to be for such time as the committee might think fit, the honorary medical staff was to be elected for a period of seven years. On attaining the age of 60 years any honorary medical officer was to cease to hold office in the hospital, but the alteration was not to lengthen or shorten the terms of office of any honorary medical officer appointed before the by-law came into operation. Provision was also made to insure that candidates should be properly qualified.

Use of the Title of "Dr." by a Dentist.

At an open court held by the Dental Board of New South Wales under the Dental Act Mr. Bradley was charged with "infamous conduct in a professional respect" by using a brass plate with the prefix "Dr." to his name, adding thereto his university degree, "B.D.S." The question was raised whether a dentist holding a bachelor's degree was entitled to call himself "Dr." by analogy to the similar practice in the medical profession; and, if not, whether it amounted to "infamous conduct" under the Act. The court gave the following decision:—

That the conduct of Mr. Bradley in assuming the title of Doctor, he having only obtained the degree of Bachelor of Dental Surgery, is such as this board condemns. Such conduct, however, appears to have been based upon a supposed claim of right to establish a practice similar to that which obtains in the medical profession. In the circumstances, the board will take no action in this case. The board, however, reserves to itself full liberty of action if, in view of the opinions now expressed, the practice is persisted in by Mr. Bradley or any other registered dentist in this State.

Action against Mr. Howse: Appeal Refused.

It will be remembered that Mr. Neville R. Howse, V.C., appealed to the Full Court against the decision given in the action against him, in the case where a patient was burned by hot bottles, and the Full Court decided in his favour. Application was made for an appeal against the decision of the Full Court to the High Court but has been refused as the case involves questions of facts, not of law. Mr. Howse is thus to be congratulated on the finally successful issue of a very trying case.

Action for Burns by the Tallerman Bath.

At the Sydney district court on May 21st an action was brought against the proprietor of an establishment for providing electric baths, Tallerman treatment, &c., for burns received during treatment. The judge said on the evidence before him it was perfectly clear that the plaintiff had been burnt while under treatment Ordinarily, it would appear from the evidence that the defendant conducted her business in the most careful way but the evidence in this case pointed to the fact of the plaintiff having been burnt on this particular day. There was no doubt the plaintiff had suffered very serious loss. He had practically been out of employment for several months and in addition had to pay 20 guineas for medical treatment, besides incurring other expenses. He gave a verdict for the plaintiff for £130.

June 10th.

FREEMASONRY.—The consecration of the "Dr. James Griffith Hall Lodge" took place on July 20th at the Masonic Hall, Swansea. There was a good attendance, amongst those present being Lord Llangattock, the Provincial Grand Master of South Wales.

MEDICAL FEES IN ST. PETERSBURG.—The municipal medical officers are extremely discontented, says the *Novoe Vremya*, with the rates of payment fixed by the town for night visits and 42 of them have petitioned the sanitary committee to raise the fees in the case of those able to pay to from 4*s.* to 6*s.*, and to from 1*s.* 6*d.* to 2*s.* for those of limited means. They have added another request to this one—namely, that Dr. Gordon (who is alleged to have been unjustly dismissed by the sanitary committee) may be reinstated in his position.

MEDICINE IN TORONTO.

I.

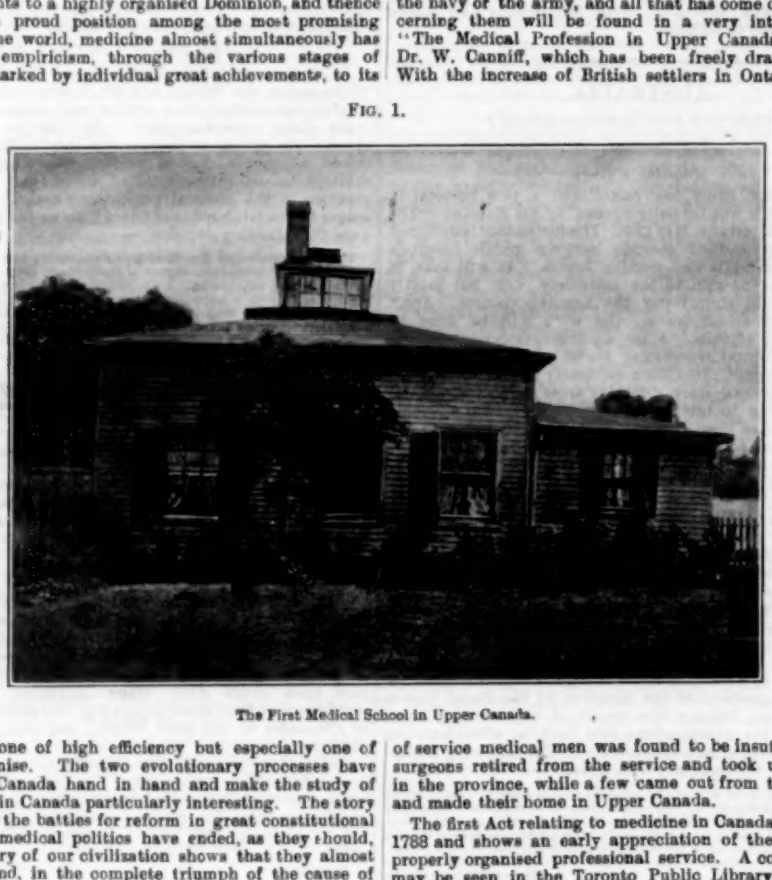
THE EARLY HISTORY OF MEDICINE IN ONTARIO; A FEW NOTES ON SOME OF THE PIONEERS.

IN view of the forthcoming meeting of the British Medical Association in Toronto it will be of interest to the readers of THE LANCET, whether they intend to visit the beautiful city on Lake Ontario in August or not, to learn something of the history of medicine in Ontario, as Upper Canada is now called. A perusal of this short series of articles will show that the medical schools of Ontario have gone through troublous times, as might be expected since their history runs coincident with both the development of scientific medicine and the development of Canada as a country. While Canada was working its way from a collection of backwood settlements to a highly organised Dominion, and thence to its present proud position among the most promising countries of the world, medicine almost simultaneously has evolved from empiricism, through the various stages of performance marked by individual great achievements, to its present state, one of high efficiency but especially one of boundless promise. The two evolutionary processes have progressed in Canada hand in hand and make the study of early medicine in Canada particularly interesting. The story also shows that the battles for reform in great constitutional affairs and in medical politics have ended, as they should, and as the story of our civilization shows that they almost invariably do end, in the complete triumph of the cause of progress. At the present time the standard of medicine in Canada generally is very satisfactory, commensurate, indeed, with the place which the Dominion is certain to hold in the world's history, while medicine in Ontario forms a particularly instructive example of social development. The writer of the following chapters has not dwelt with any emphasis upon the suitability of Toronto as a meeting place of the British Medical Association, taking it for granted that the beauty of the city and its site are known by repute to all of us. Standing on the shores of its splendid inland sea, wonderfully endowed by nature with all the qualities that make a great human settlement sanitary as well as beautiful, in close connexion with the vast and stimulating western republic, and linked up by rail and water with boundless hinterlands in all stages of development and fertility, Toronto could hardly escape becoming an important capital. The city has had its waves of depression following its periods of too previous exaltation, many fortunes have been lost as well as made within its undefined boundaries, there have been disappointments as well as triumphs, but far-sighted men have never felt in doubt as to the ultimate high destiny of Toronto, and those who believe that the straight road to a future of grand prosperity has now been reached number among them some of the shrewdest heads in our empire.

We are here, however, concerned only with the history of the development of medicine in the colony.

Up to the year 1776, the time of the American Rebellion, the province of Ontario was a dense wilderness. Its survey was begun in 1783 and in the following year its settlement commenced. The medical men who practised among the English people residing in Canada immediately after the rebellion were almost entirely British surgeons belonging to the navy or the army, and all that has come down to us concerning them will be found in a very interesting book, "The Medical Profession in Upper Canada," written by Dr. W. Canniff, which has been freely drawn upon here. With the increase of British settlers in Ontario the supply of service medical men was found to be insufficient. Some surgeons retired from the service and took up their abode in the province, while a few came out from the old country and made their home in Upper Canada.

FIG. 1.



The First Medical School in Upper Canada.

The first Act relating to medicine in Canada was passed in 1788 and shows an early appreciation of the benefits of a properly organised professional service. A copy of this Act may be seen in the Toronto Public Library and its title reads in part as follows:—

An Act or Ordinance to prevent persons practising physic and surgery within the province of Quebec, or midwifery in the towns of Quebec and Montreal without licence.

(It must be borne in mind that Upper Canada was at that time a portion of the province of Quebec.) The Act went on to state that to obtain such a licence a person must have been examined and granted a certificate by medical men appointed for the purpose by such personages as the Governor or Commander-in-Chief of the province. Surgeons of the navy or the army or any persons who had taken a medical degree in any University were exempted from the provisions of this Act.

The next governor of Upper Canada was Peter Hunter,

stated to be one of the numerous brothers of the famous John Hunter, in the year following whose death a second medical Act was passed which repealed the former Act. So far as medical legislation was concerned after the repeal of the first Act matters were at a standstill up to the year 1815, when another Act was passed entitled "An Act to Licence Practitioners in Physic and Surgery." This Act was enacted by, and with the advice and consent of, the Legislative Council and Assembly of the province of Upper Canada and was a lengthy document the regulations in which were fairly strict and comprehensive. It appears, however, not to have been very practical, for in 1815 the number of qualified medical men in Upper Canada was about 40 but there were many unqualified men and a considerable number of quacks. The Act passed in 1815 was repealed in 1818 by a new Act. This Act was the strictest as yet enacted and was indeed the first effective step in the direction of placing the medical profession of Upper Canada upon a proper and dignified basis. The most important provision of this Act was that ordering the appointment of a medical board empowered to examine, and if considered fitting to grant licences to, those desirous of practising medicine in Upper Canada. This board came into force on Nov. 27th, 1818, and on Jan. 4th, 1819, the board was convened at York, as Toronto was called at that date in its history. The records of this board are contained in two volumes now in the custody of the Registrar of the College of Physicians and Surgeons of Ontario and its minute books provide very instructive and interesting reading. The board appears to have been mindful of its duties and responsibilities so far as may be gathered from the minutes. For example, it is recorded that a large number of would-be practitioners of medicine were disqualified as unfit, though the details of the examination are not forthcoming. Probably general evidence as to training was accepted.

A minute of Oct. 8th, 1819, is especially interesting, as it contains an account of the proposals to build the first hospital in Toronto. The announcement with regard to this matter was as follows:—

> Proposals for building by contract a brick hospital in the town of York will be received at the Post Office by William Allan, Esq., where a plan, elevation, and particular description of the intended building may be seen and any information respecting it obtained.

Referring to this building Dr. Canniff says that it is uncertain how soon thereafter the hospital was erected, but reference is made to the hospital in the weekly register for 1822 so that no very prolonged delay took place.

With regard to this building the late Dr. Scadding, rector of Holy Trinity, Toronto, records in his interesting book "Toronto of Old" that—

> The old hospital was a spacious, unadorned, matter-of-fact, two-storey structure of red brick, one hundred and seven feet long and sixty-six feet wide. It had the peculiarity of standing, with its sides precisely east and west, north and south. At a subsequent period it consequently had the appearance of having been jerked round bodily, the streets in the neighbourhood not being laid out with the same precise regard to the cardinal points. The building exhibited recessed galleries on the north and south sides and a flattish hipped roof. The interior was conveniently designed.

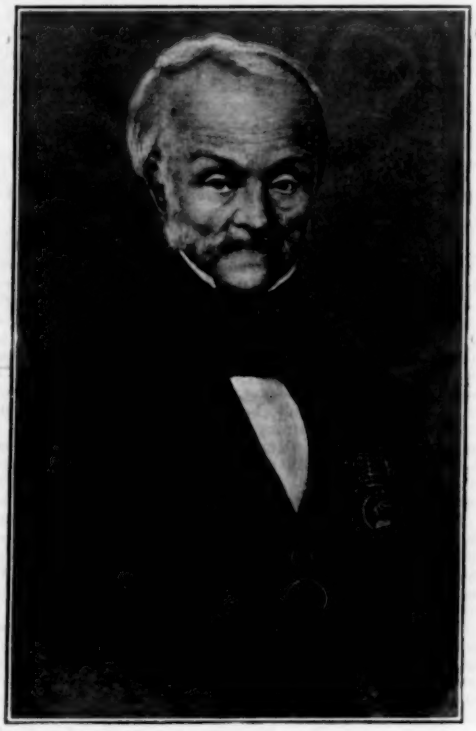
The Medical Board at its meeting in April, 1832, spoke of the hospital in terms which show that the institution was recognised at once as a centre for medical education, the following being the minute:—

> The York Hospital is now in successful operation and affords to students daily opportunities of observing diseases and their treatment, and they feel it a duty to point out to students that it is at such institutions they can best acquire, at the bedside of the patient under experienced practitioners, the practical information most especially befitting them to render professional services to their fellow creatures.

In 1832 Dr. John Rolph, a most original and interesting man to whom future reference will be made, was commissioned a member of the Medical Board and undoubtedly exercised great influence upon its deliberations. In the same year Toronto was devastated by an epidemic of cholera, with which the members of the Medical Board, in their capacity as advisers to the Board of Health, showed themselves able to cope most effectually. Many of the views expressed by them 58 years ago might have been uttered by a modern sanitarian so clearly are the benefits of hygiene and the results of its neglect laid down.

In the year 1837 the Medical Board, which had in the meantime been reconstructed, carried on a lengthy correspondence with the authorities of King's College (now the University of Toronto) and the Lieutenant-Governor of the province as to the advisability of establishing a medical faculty at that seat of learning. The board strongly recommended the creation of such a faculty, but its views and those of the Lieutenant-Governor and his advisers clashing on many important points the scheme fell through. Eventually in 1839 the College of Physicians and Surgeons of Upper Canada was founded, the majority of the members of the Medical Board having been appointed Fellows. Soon after the incorporation of the College of Physicians and Surgeons its governing body made overtures to King's College to coöperate and conjointly to establish a school of medicine. The authorities of King's College, however, refused the offer. In 1840 the legal status of the College of Physicians and Surgeons was called in question, and in January, 1841, the Act establishing the school was disallowed. During its brief and somewhat chequered existence the College of Physicians and Surgeons of Upper Canada undoubtedly deserved well of the public and of the medical profession. Dr. Canniff bears the following testimony to its work:—

FIG. 2.



Dr. Christopher Widmer.

> The efforts of these comparatively early medical men to raise the character of the profession, to establish a Canadian Medical School that the young men of the province should not be obliged to go abroad for medical instruction, are worthy of all commendation. Nor may it be supposed that their work was in vain. The seed sown by them has resulted in a rich crop, reaped by the later generations of our profession in the province. No one can read the Transactions of the College of Physicians and Surgeons of Upper Canada without being impressed with the fact that the governors had lofty aims and the interest of the profession fully at heart, at the same time looking to the welfare of the public; and it must not be forgotten that their work was performed more than half a century ago.

The dissolution by legal methods of the College of Physicians and Surgeons brought the Act of Parliament under which the old Medical Board was formed again into force. It once more began its sittings and in January, 1842, presented a memorial to His Excellency the Governor-General of Canada as Chancellor of the University of King's College, praying that a Faculty of Medicine might be established in that University. The Lieutenant-Governor acceded to this request, while in February of the same year a resolution was passed

by the council of King's College stating that for the purpose of affording the necessary facilities to students in the Faculty of Medicine it would be advantageous if the Toronto General Hospital were for the present utilised. The council proposed accordingly to devote an annual sum to the maintenance of beds for a certain number of patients in addition to those which the funds of the hospital trustees already enabled them to provide. Thus after long and repeated efforts a medical school was established in Upper Canada, in proper connexion with a university faculty and with a hospital where teaching facilities could be obtained.

The report of the newly formed medical faculty, made at the end of December, 1843, recommended among other measures that immediate arrangements should be made whereby the professors of the medical faculty should have either the exclusive medical superintendence of the hospital or a certain number of wards reserved for their sole use. It was ordered that for the present the rooms occupied as the museum and workshop should be the apartment wherein the school of medicine should be conducted and that the business of the school should commence there on Monday, Jan. 15th, 1844, and that a frame building erected on the north or west side of the western wing would be sufficient for the above purposes. This building was to be erected forthwith. This plan was carried out as recommended and the first building in connexion with the first university medical school of Upper Canada was erected in 1844. (Fig. 1.)

Among Canadian fathers of medicine and surgery, to turn to the personalities of the pioneers, the foremost place is without doubt due to Dr. Christopher Widmer. (Fig. 2.) To Dr. James Henry Richardson, himself one of the best known medical men to this and a past generation in Toronto, we are greatly indebted for personal reminiscences of Dr. Widmer and of other early Canadian medical practitioners. Dr. Widmer was a Member of the Royal College of Surgeons of England and before coming to Canada had been staff-surgeon attached to the 14th Light Dragoons. He served through almost the entire Peninsular war and came to Canada 1812-15. He commenced practice in York (Toronto) about the year 1816 and died there in 1858. As a surgeon he is reported on all hands to have possessed the highest skill, and he took the greatest possible interest in all appertaining to his profession. He was a member of the Upper Canada Medical Board from the time of its inception in 1819 and chairman from 1823, and the guiding spirit of the general hospital from its foundation. He was a public-spirited citizen as well as a really great surgeon. Dr. Richardson's first recollections of Dr. Widmer date from 1837 and he describes him as a small and wiry man, with a somewhat unhappy look but with keen eyes. In speech he was abrupt and commanding, given to the use of strong and forcible language, but withal extremely kind-hearted.

Of all the early medical practitioners in Toronto perhaps, on the whole, the most gifted and celebrated was Dr. John Rolph. He had a stormy career, for he lived in stirring times and was himself a moving spirit in the Mackenzie rebellion of 1837. Dr. Rolph in his day played many parts, for he was distinguished as a politician, as a physician, and as a member of the Bar. But it was as a teacher of medicine that he chiefly shone. In this branch of medical science he was pre-eminent. Dr. Rolph came out to Canada from Gloucestershire, in which county he was born, very early in the century. Dr. Richardson thinks he emigrated about 1812, at which time he would have been 19 years of age. He probably, however, did not emigrate to Canada until a few years later. He had been educated at Guy's Hospital Medical School and was a pupil of Sir Astley Cooper. He became a Member of the Royal College of Surgeons of England and is supposed to have returned to England to prosecute his law studies after he had originally reached Canada. At any rate, he became a member of the Inner Temple and practised in Canada both in law and medicine in the year 1831, when he also took an active part in politics. After the failure of the 1837 rebellion Dr. Rolph, who had joined William Lyon Mackenzie in his plot against the existing Government, fled to Russia, but after a time returned to the United States and practised in Rochester up to 1843, when the ban was removed by Act of Parliament and those who had taken part in the rebellion were allowed to go back. Soon after his return he founded a school of medicine which in 1853 was incorporated under the title of the "Toronto School of Medicine," of which more later. Dr. Richardson describes Dr. Rolph as dignified in appearance, quiet and precise in speech, with absolute self-control, courtly in manner, a profound reasoner, and a charming and persuasive orator. He was certainly one of the most influential members of the Reform party in Canada and that party has had its influence upon present day Canadian prosperity. He was also well versed in all branches of medical and surgical science, especially capable of communicating knowledge, and most punctilious in discharge of his duties as a teacher. Dr. Rolph died in October, 1870, at the age of 83 years.

Several of the medical professors attached to King's College in 1843, when the medical school was first established, had been members of the old Medical Board, and their work ought to be put upon record, however briefly. Of these Dr. King was professor of medicine and one of the leading medical practitioners of Toronto. Dr. W. C. Gwynne, professor of physiology, was one of three brothers all of whom distinguished themselves. One was judge of the Supreme Court and the other was for many years examiner for the benchers at Osgoode Hall, the Law Courts of Upper Canada. Dr. Henry Sullivan, professor of anatomy and curator of the museum, was a Fellow of the short-lived College of

FIG. 3.

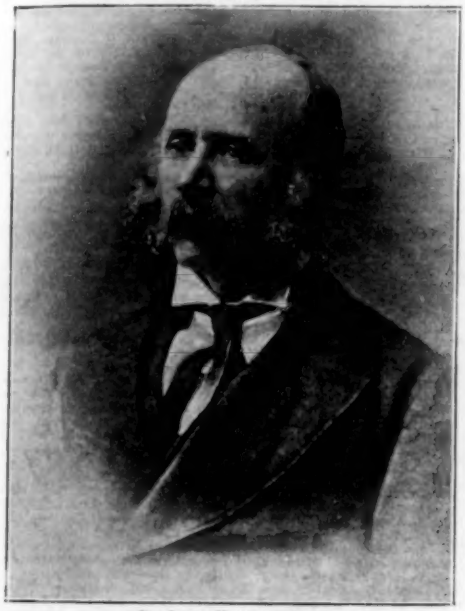
Dr. John Rolph.

Physicians and Surgeons of Upper Canada. He was younger brother of the late Chief Justice Sullivan. Of Professor Sullivan Dr. Richardson speaks in the highest terms. He was a fine, handsome man and a finished anatomist, most assiduous in discharge of his duties, and greatly beloved by all with whom he came into contact. He died from pulmonary tuberculosis in 1850. Dr. Grant Powell was a member of the Medical Board of 1822. He was born in Norwich, England, in 1779 and died in 1838, and throughout his medical career in the colony was accepted as a leader of scientific thought. Dr. William Warren Baldwin, another member of the Medical Board of 1822, came to Canada from Cork, Ireland, in 1789, and settled in Toronto at a date somewhat later. He died in 1844. He was more distinguished as a barrister than as a medical practitioner.

Dr. James Henry Richardson, to whom we owe much of this information, was born at Presqu' Ile in 1823. He began his medical studies in 1841 with Dr. John Rolph, then living in Rochester, N.Y., and remained with him for two years. In 1844 he went to London and studied at Guy's Hospital for three years. He is said to have been the first Canadian to receive the diploma of the Royal College of Surgeons of England. In 1848 he took the degree of M.B. at King's College, Toronto, and in 1850

was appointed to succeed Dr. Henry Sullivan as professor of anatomy in the newly constituted medical department of the University of Toronto, having acted as substitute for Professor Sullivan when the latter was incapacitated from duty by illness. Dr. Richardson held the chair of anatomy in the University until the medical department was abolished in 1853, and when the medical faculty was re-organised he was again appointed professor of anatomy. He has been on the staff of the Toronto General Hospital and is an ex-president of the Ontario Medical Association. Referring to medical practitioners in Toronto prior to 1833 Dr. Richardson in the reminiscences with which he assisted us to write these articles was unable to record anything in regard to their personalities, but although he does not remember the individual practitioners he has vivid recollections of bleedings, purgatives, blistering, and leeching as he himself in 1829 underwent these drastic remedies for the relief of acute rheumatism at that date. In the early "thirties" Dr. Richardson was acquainted also with a Dr. Morrison, who was Mayor of "Muddy little York" when its name was changed to Toronto. Dr. Morrison was tried for high treason for his share in the rebellion of 1838. It was expected that he would be convicted and his life trembled in the balance

FIG. 4.



Dr. James H. Richardson.

but the jury after long deliberation brought in a merciful verdict. Dr. Morrison, like Dr. Rolph, went to Rochester, N.Y., and remained there until the amnesty.

Dr. Richardson gave us an amusing sketch of a method of medical treatment in vogue in Toronto in the early "thirties" known as "Thompsonism." It derived its name from one Thompson who published a book on Medicine, the two leading principles of which were—first, that all mineral medicines are poisons, and the second, that "Life is heat and cold is death." His practice was limited to the use of antidotes to "canker," and a few vegetables like lady's slipper (cypripedium) and lobelia. His principal remedies were numbered from 1 to 6. His mainstay he named 6. It consisted of gum, myrrh, cayenne pepper, and brandy. It is interesting to learn that even in the early days of Toronto quackery was more or less rampant and, of course, so far as homœopathy is concerned the practice has far more sway and its followers are far more numerous in the United States and in Canada than in the United Kingdom. (Fig. 4.)

This sketch of the early history of medicine in Upper Canada brings us to the year 1842, when a definite effort was made to establish a medical school in Toronto.

(To be continued.)

Obituary.

JOHN BLACKBURN, M.R.C.S. ENG., L.S.A.

Mr. John Blackburn, a well-known medical practitioner in Barnsley and formerly mayor of that town, died at his residence there on July 7th. Mr. Blackburn, who was in his seventy-third year, had been in failing health for some time and on the Tuesday before his death the guardians had consented to his son, Dr. Ernest W Blackburn, temporarily taking over his father's duties as medical officer of the first district of the Barnsley union. Mr. Blackburn, who was educated at the Barnsley Grammar School, began his medical work under the late Dr. Jackson of Barnsley, subsequently studying at the Sheffield Medical College and in London. In 1859 he was admitted a Member of the Royal College of Surgeons of England and three years later a Licentiate of the Society of Apothecaries of London. He began practice in Barnsley in 1859 and was soon after appointed medical officer to the Barnsley union, a post which he shared with one colleague. Some years later the districts were re-arranged and Mr. Blackburn was then appointed medical officer and public vaccinator to the town of Barnsley, both of which posts he held until his death.

Mr. Blackburn was a keen Volunteer; he was the holder of the Volunteer Decoration and served at various times as surgeon-major of the 2nd Volunteer Battalion York and Lancaster Regiment and Brigade-Surgeon-Lieutenant-Colonel of the East Yorkshire Volunteer Brigade. In another capacity he did a great deal to popularise ambulance work and was one of the first of the honorary associates of the Order of St. John of Jerusalem. He was for many years on the active staff of the Beckett Hospital and latterly acted as consulting surgeon. His civic connexion with Barnsley began in 1869 when the borough was incorporated. In that year he was elected councillor for the South Ward, in 1884 he became an alderman, and in 1891 he was elected mayor. In 1873 he lost his seat as councillor owing to his having strongly supported the building of swimming baths, to which many ratepayers were opposed. But in the following year he was re-elected and remained councillor until his election as alderman. Besides being surgeon to the Beckett Hospital he was also surgeon to the Midland Railway Company and to the West Riding constabulary.

The funeral took place on July 10th when his body was laid to rest in High Bradfield cemetery. The first part of the Burial Office was said at St. Mary's Church and the remainder at the graveside. The body was escorted to the cemetery by the members of the family and by a large number of representatives of public bodies and institutions in the town with which Mr. Blackburn had been connected. Mr. Blackburn, whose wife predeceased him, leaves three children, one daughter and two sons. Both sons are in the medical profession and in practice at Barnsley.

CHARLES ANGUS, M.B., C.M. ABERD.

Dr. Charles Angus, medical superintendent of Kingseat Asylum, Aberdeenshire, who obtained leave of absence only a short time ago from the Aberdeen Lunacy Board, had been suffering from a serious internal complaint for which an operation became necessary, but in spite of the careful attention of his medical friends his death took place in a nursing home in Aberdeen shortly before 3 o'clock on the morning of July 21st, in his forty-eighth year. At the time of his appointment to Kingseat in March, 1903, Dr. Angus was medical superintendent of the Royal Infirmary, Aberdeen, and he was formerly senior medical assistant at the Aberdeen Royal Lunatic Asylum. While a student in the University of Aberdeen he gained prizes or honorary certificates in most of the medical classes. In 1887 he graduated M.B., C.M. After his graduation he was elected senior demonstrator of anatomy. In June, 1889, he was appointed junior resident medical assistant at the Aberdeen Royal Asylum. In March, 1890, he was promoted to the senior assistantship, a post which he held for nearly eight years. During that period he was fortunate in seeing the recent extension of the asylum carried out. He had had altogether ten years' experience in the working of the various departments of an asylum in which about 750 patients were accommodated. On leaving the Aberdeen Royal Asylum he

was appointed medical superintendent of the Aberdeen Royal Infirmary and Convalescent Hospital. He continued to make a special study of mental derangement and its treatment in all its bearings and to make a special study also of asylum construction and administration, and amongst other institutions he visited and made himself familiar with the construction and working of the asylum at Altscherlitz in Germany. Dr. W. Reid, the medical superintendent of the asylum, described Dr. Angus as "a man possessed of shrewdness, firmness, and tact, all intermingled with much kindness of heart. He has a complete knowledge of the working and management of a large lunatic asylum in all its details, more especially in regard to the internal economy, to farming in all its aspects, to amusing and dealing with patients, a gift which few possess to the same extent." Dr. Angus was a native of Rhynie, Aberdeenshire. He leaves a widow and two daughters.

Medical News.

ROYAL COLLEGES OF PHYSICIANS OF LONDON AND SURGEONS OF ENGLAND.—The following gentlemen passed the examination in Practical Pharmacy held on July 18th and 19th:—

George Aldridge, St. Bartholomew's Hospital; James Appleyard, University College Hospital; David Greig Arthur, St. Bartholomew's Hospital; Raymond Glendour Bingham, St. Thomas's Hospital; Guy Capper Birt, St. Thomas's Hospital; Arthur Ellis Blythman, Sheffield University and Charing Cross Hospital; Ivo Gelkie Cobb, St. Thomas's Hospital; Bevil Molesworth Collard, London Hospital; James Thomas Daly, L.D.S., Middlesex Hospital; Samuel Danziger, Manchester University; David Henry Davies and William Townsend Dobson, University College, Cardiff; Howard Robinson Elliott, Sheffield University and private; Gordon Ernest Dormer Ellis, St. Bartholomew's Hospital; Daniel Charles Evans, University College, Cardiff; Hugh Arthur Evans, Westminster Hospital and private; Cyril Douglas Faulkner and Edwin George Percival Faulkner, St. Mary's Hospital and private; Hilton Evans Bear Finlaison, St. Mary's Hospital; William Trevor Flooks, Cardiff; Gordon John Gallagher, Liverpool University; Harold Gibson, London Hospital; George Graham, B.A. Cambridge, Cambridge University and St. Bartholomew's Hospital; Harry Leroy Satterlee Griffiths, University College Cardiff; John Griffiths, Technical College, Swansea; Clifford Hall, Manchester University; Charles Herbert Hart, University College, Bristol; Geoffrey Richard Heard, London Hospital; Thomas Shirley Hele, B.A. Camb., B.Sc. Lond., Cambridge University and St. Bartholomew's Hospital; Edward Coomber Hobbs and Rowland Augustus Hobbs, St. Mary's Hospital; Francis Harold Holl, Cambridge University and St. Thomas's Hospital; William Henry Hooton and Ernest Howden, Leeds University; David Edward John Stopford Hughes, St. Bartholomew's Hospital; Alfred Herbert James, University College Hospital; Geoffrey Jefferson, Manchester University; Griffith Lewis Jones, University College, Cardiff; Charles Frederick Vivian Kebbell and William Robert Kilgour, St. Bartholomew's Hospital; Charles Haley Knowles and John Murgatroyd Land, Leeds University; Martyn Henry Langford, Middlesex Hospital; William Bertram Lawrence, University College, Cardiff; Septimus Joseph Lee, Middlesex Hospital; Edward Claude Linton, London Hospital; Donald McCully, University College; Colin McIver, Madras and University College Hospital Henry Sinclair Mason, St. Mary's Hospital and private; Albert Ernest Moore, London Hospital; Claude Woodham Morris, University College Hospital; Alfred Philip Nicolle and Hubert Lewis Clifford Noel, London Hospital; Charles Noon, St. Bartholomew's Hospital; Robert Sydney Overton, King's College and St. Thomas's Hospitals; Georg Natanael Palmaer, London Hospital; Richard Alfred Parsons, St. Mary's Hospital; Stuart Kingsley Poole, Guy's Hospital; James Freer Richardson, London Hospital and private; Hugh Rimington, St. Bartholomew's Hospital; Thomas Stanley Rippon, University College, Bristol; Horatio Nelson Ritchie, Sheffield University and private; John Selfe, St. George's Hospital; Edgar Arthur Shirvell, London Hospital and private; Oliver Thomas Slatter, M.R.C.S., Guy's Hospital; Harry Stobie, Charing Cross and St. Thomas's Hospitals; Reginald Woolsey Stocks and Thomas Edmund Alexander Stowell, St. Thomas's Hospital; Charles Henry Burton Thompson, Middlesex Hospital; George Gilbert Timpson, L.D.S., Guy's Hospital and private; Walter Vincent Tothill, London Hospital; Arthur John Tozer, St. Mary's Hospital; Hugh Bevan Walker, London Hospital and private; Alexander Watson, London Hospital; John Ernest Price Watts, Westminster Hospital and private; Frederick Cecil Wright, St. Bartholomew's Hospital; and Raphael Yood, Manchester University.

UNIVERSITY OF LONDON.—At the examination for the M.D. degree held recently the following candidates satisfied the examiners:—

Medicine.—John Hunter Clatworthy, Guy's Hospital; Fred Claude Bromley Gittings, Middlesex Hospital; Louisa Hamilton, B.S., London (Royal Free Hospital) School of Medicine for Women; Charles Voughton Knight, St. Bartholomew's Hospital; Harold Charles Corry Mann, B.S., and Edwin Henry Britton Milsom, Guy's Hospital; Edgar Coningsby Myott, B.S., Guy's Hospital and Victoria University; Thomas Perrin, B.S., St. Thomas's Hospital; Harold Pritchard, B.S., St. Bartholomew's Hospital; William Arthur Rees, Middlesex Hospital; George Herbert Sowry, B.S., St. Bartholomew's Hospital; Henry Francis Bell Walker, Guy's Hospital; and Howard Edward Wise, Middlesex Hospital.

Mental Diseases and Psychology.—Gayton Warwick Smith, Guy's Hospital.

Midwifery and Diseases of Women.—George Ernest Aubrey, B.S., St. Bartholomew's Hospital; Lucian A. E. de Zilwa, B.Sc., University College; Llewellyn S. H. Glanville, B.S., Guy's Hospital; William Percy Gowland, B.S., Victoria University; Ernest Charles Mackay, B.S., St. Bartholomew's Hospital; Harold Farley Seymour, London Hospital; Frank Edward Taylor, B.S., University of Leeds and King's College; Ernest Frank Travers and Vere Gwinlyn Ward, St. Bartholomew's Hospital; and Florence E. Willey, M.S., B.Sc., London (Royal Free Hospital) School of Medicine for Women.

State Medicine.—Morgan James Rees, Guy's Hospital.

Tropical Medicine.—Frederick Norman White, St. Bartholomew's Hospital and London School of Tropical Medicine.

N.B.—This list, published for the convenience of candidates, is issued subject to its approval by the Senate.

SOCIETY OF APOTHECARIES OF LONDON.—At examinations held in July the following candidates passed in the subjects indicated:—

Surgery.—J. L. Meynell (Section II.), London Hospital; E. Sutcliffe (Section I.), Leeds; E. J. P. Thomas (Section II.), Middlesex Hospital; and G. L. Walker (Sections I. and II.), Leeds.

Medicine.—A. C. J. Elwin (Sections I. and II.), King's College Hospital; E. Gay (Section II.), Lausanne; H. J. May (Sections I. and II.), London Hospital; J. L. Meynell (Section II.), London Hospital; E. Moir (Sections I. and II.), Manchester; L. Nicholls (Section I.), Cambridge and London Hospital; A. F. Reardon (Section I.), St. Bartholomew's Hospital; A. Shepperd (Sections I. and II.), Guy's Hospital; E. W. Squire (Sections I. and II.), St. Mary's Hospital; E. J. P. Thomas (Section II.), Middlesex Hospital; and W. H. Williams (Section I.), St. Bartholomew's Hospital.

Forensic Medicine.—E. V. Connellan, Bristol; A. C. J. Elwin, King's College Hospital; W. H. Lister, Durham; E. Morris, St. Bartholomew's Hospital; L. Nicholls, Cambridge and London Hospital; A. Shepperd, Guy's Hospital; E. W. Squire, St. Mary's Hospital; F. A. K. Stuart, Cambridge and St. Mary's Hospital; and W. H. Williams, St. Bartholomew's Hospital.

Midwifery.—E. R. Bastard, St. Bartholomew's Hospital; E. S. Cooke, Royal Free Hospital; G. B. Messenger, Westminster Hospital; L. Nicholls, Cambridge and London Hospital; and P. D. Pickles, Leeds.

The diploma of the Society was granted to the following candidates, entitling them to practise medicine, surgery, and midwifery:—H. J. May, J. L. Meynell, E. Morris, and E. J. P. Thomas.

UNIVERSITY OF GLASGOW.—The following degrees were conferred on July 17th:—

Doctors of Medicine (M.D.).—Commendation: Madge Speirs Maclean, M.B., C.M., Scotland. Ordinary degree: John Allan, M.B., C.M., Scotland; John Andrew Cook, M.B., C.M., Scotland; Daniel Ferguson, M.B., C.M., Scotland; and John Selkirk, M.A., M.B., C.M., Scotland.

Bachelor of Medicine and Master in Surgery (M.B., C.M.).—Honours: Robert Stewart M'Kim, M.A., Scotland.

Bachelors of Medicine and Bachelors of Surgery (M.B., Ch.B.).—Honours: *Peter Mitchell, M.A., Scotland; and John Stevenson, Scotland. Commendation: William Rome Cammock, Scotland; George Haswell Wilson, England; James M'Farlane, Scotland; Thomas Baillie Smith, Scotland; James Richan Drever, M.A., Scotland; Elizabeth Maud M'Vail, Scotland; William James Rutherfurd, Scotland; and William Gilfillan, Scotland. Ordinary degrees: John Anderson, M.A., B.Sc., Scotland; Thomas Barbour, M.A., B.Sc., Scotland; George Duncan Morrison Beaton, Scotland; Charles Burns, Scotland; John Miller Hopkins Caldwell, Scotland; George Campbell, Scotland; William Archibald Campbell, Scotland; Henry Howard Christie, New Zealand; John Sawers Clark, M.A., Scotland; James Coutts, Scotland; Thomas Lawson Craig, Scotland; Arthur Muir Crawford, Scotland; Ernest Milne Eaton, Scotland; William Gilbert, Scotland; Arnold Harris Gray, Scotland; Robert Neil Guthrie, New Zealand; Charles Francis Dyer Hammond, England; William Towers Hardie, Scotland; Robert M'Cowan Hill, Scotland; Alexander Hunter, Scotland; Archibald Yuill Hutchison, Scotland; John Keys, Scotland; James Dunlop Kidd, Scotland; William Hendrie Kirk, Scotland; Alexander M'Call, Scotland; Thomas M'Cririck, M.A., B.Sc., Scotland; David MacDonald, Scotland; John Robert M'Gilvray, Scotland; William Anderson M'Kellar, Scotland; William Ferguson Mackenzie, Scotland; Norman Smith MacNaughtan, Scotland; Alister Argyle Campbell M'Neill, Scotland; Andrew Alexander M'Whan, Scotland; Florence Mann, Scotland; William Hislop Manson, M.A., Scotland; Robert Marshall, Scotland; John Miller, Scotland; William Miller, Scotland; Edith Oversby, England; James Hogg Paul, Scotland; Agnes Picken, M.A., Scotland; Alexander MacMillan Pollock, Scotland; Thomas Hood Rankin, Scotland; Vera Dagmar Reis, Ireland; Frederick Gordon Robertson, Scotland; William Hermann Sieger, Scotland; William Smellie, Scotland; James Stevenson, Scotland; David Laurence Tate, Jamaica; Charles Samson Thomson, Scotland; James Wyper, Scotland; John Young (Mount Vernon), Scotland; and Morris Youdelevitz Young, Syria.

* Dr. Mitchell gains the Brunton memorial prize of £10, awarded to the most distinguished graduate in medicine in the year.

KING'S COLLEGE, LONDON.—A class in experimental psychology, including practical work and demonstrations, will be held by Professor C. S. Myers on Saturdays at 11 A.M., in the Psychological Laboratory of the College. The class will first meet on Oct. 6th, at noon, and those who wish to attend are requested to apply to Professor Myers at Melrose, Grange-road, Cambridge. A course of lectures on General Psychology will also be given by Professor Myers during the October session on Wednesdays at 2 P.M.; these lectures will be repeated on Fridays at

6.30 P.M. Further particulars may be obtained from the Secretary at King's College.

PUBLIC HEALTH IN MADEIRA.—Mr. Edward Vicars, the British Consul at Madeira, in his report for 1905, received at the Foreign Office on May 26th, states that the health statistics for the year were good, showing considerable improvement on those for the two previous years. The total number of deaths from all causes in Funchal amounted to 1041 out of a population of 43,375, as against 1258 in 1904 and 1531 in 1903, or at the rate of 35·2, 29, and 24 per 1000 in the three successive years. The death-rate on the population of the whole island—150,574 (of whom no less than 135,580 are illiterates)—was, if the statistics are correct, only 22·5 per 1000. There was no further outbreak of typhoid fever, such as caused so much alarm in 1903 and 1904, the deaths from that disease being only 16, as against 47 and 59 recorded in those two years. It is to be hoped, however, remarks Mr. Vicars, that this comparative immunity from the malady will not serve to lull the authorities into a false feeling of security and thereby cause them to postpone the carrying out of a proper system of drainage and the establishment of a trustworthy water-supply, both of which are urgently needed. In regard to an alarm of plague which had a crippling effect on the business of the port during the closing week of the year, the Consul observes: "This would not be the place, even were the matter not now the subject of a judicial inquiry, to discuss the question in all its bearings, but I may perhaps be permitted to say that the action of the mob who finally stormed the lazaretto and liberated the so-called 'plague' patients proved beyond all question that no plague existed, for no outbreak of that or any other disease followed the rescue of the inmates and their restoration to their homes as must inevitably have happened had they been suffering from a highly infectious malady. On the contrary, they one and all proceeded to recover. The annexed statistics of the deaths in Funchal and its neighbouring parishes during the winter months of the last three years afford the most eloquent commentary on the genuineness of this unfortunate scare, which, besides paralysing the business of the port, has been responsible for one of the worst visitors' seasons of recent years:—

Deaths in Concelho of Funchal during Winters of 1903-04 to 1905-06.

	1903-04.	1904-05.	1905-06.
November	145	73	76
December	151	100	95
January	142	80	71

These figures speak for themselves. The 1904–05 returns were normal, those for 1903–04 having been greatly swelled by the severe epidemic of typhoid to which I have already referred. The number of deaths of British subjects in Madeira during 1905 was 14, but this figure bears no relation to the mortality among the permanent British colony (numbering 270), as many of those who die here are either visitors or British seamen left behind in the Seamen's Hospital."

LITERARY INTELLIGENCE.—We learn that the twelfth edition of the Extra Pharmacopœia of Martindale and Westcott will be published about the middle of August. It is stated that the text has been rearranged for more ready reference and that additions have been made taken from current literature and from many recent standard works, especially various national Pharmacopœias. A new feature in the work is the appearance of chemical formulæ for all bodies to which a definite chemical constitution could be attributed. The molecular weights of these bodies have been calculated in terms of the British Pharmacopœia equivalents, those of the International Atomic Weights, 1906, and in terms of the United States Pharmacopœia. Greater prominence has been accorded to dental therapeutics. Antitoxins and serum-therapy have been brought up to date in the light of the most recent researches, theories, and trials. The sections on radiology, clinical analysis, bacteriology, and the therapeutic index have similarly been thoroughly revised. The work contains over 350 pages more than the eleventh edition but the book remains even now of a size which can be conveniently carried in the pocket of the physician or the chemist. In the section on organotherapy preparations of the duodenal membrane, suprarenal and thyroid glands, and the method of treatment by the inspissated milk of thyroidectomised animals have received careful attention; under the heading antitoxins, vaccines, and antitoxic serums the subjects of anthrax (Sclavo's serum), malaria, leprosy, plague, cancer, tetanus, trypanosomiasis, tuberculin, vaccine, &c., have all been brought up to date in the light of the most recent researches; the latest views on opsonins are described.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL.—The clinical report of Queen Charlotte's Lying-in Hospital for 1905 states that during the year ending Dec. 31st there were 1544 in-patients discharged after delivery, 930 being primiparæ and 614 being multiparæ. The average duration of stay in the hospital was 14 days. There were five maternal deaths, all in multiparæ, of ages from 33 to 45 years, the causes being placenta prævia, septicæmia, peritonitis, anuria, and accidental hæmorrhage. Forceps were used to deliver the forecoming head in 144 cases, giving a forceps-rate for the year of 9·3 per cent. Of these patients 18 were multiparæ, the remainder being primiparæ; all made good recoveries, except one primipara who suffered from eclampsia, septic endometritis, and pulmonary embolism, but in the result she recovered completely. Uterine inertia and persistent occipito-posterior positions were the two commonest indications for forceps. The youngest and oldest patients for whom forceps were used were 14 and 46 years of age respectively. Version was performed in 17 cases, in ten of which the shoulder presented. Contracted pelvis was found in 61 patients. Women seeking admission to the hospital are generally seen about eight weeks before term; primigravidæ then have their pelves measured and multigravidæ who have had previous obstetric trouble are also examined. Spontaneous delivery occurred in 14 of these cases; 17 were treated by induction of premature labour, nine by Cæsarean section, 18 by forceps, and six by version. Eclampsia occurred in six patients, all of whom recovered; the report makes special mention of the good effects of intravenous injections of normal saline solution in this condition.

MANCHESTER HOUSING AND HEALTH.—A memorial from the Manchester and Salford Sanitary Association was recently presented to Sir Thomas T. Shann who received it on behalf of the Lord Mayor of Manchester who was unable to be present. The memorial urged that it was necessary for the proper guarding of health of the citizens of the future that town councils should have more extended powers of buying and laying out land in the neighbourhood of our towns and that they should have, and use, the power of making plans for all land not built on, and near the towns, which must be complied with, such plans to arrange for the width and direction of the streets and the number and size of the open spaces. The memorialists approved a suggestion of the social questions committee that there should be a conference of local authorities for the purpose of agreeing, if possible, on a definite plan of laying out intermediate areas not now built on so as to insure better housing conditions for the future. Dr. W. E. Sawers Scott spoke of the damage done in the past by the lack of system in laying out our cities and by the builders building at their sweet will. He was followed by Mr. T. C. Horsfall, who said their object was to ask town councils to put a stop to an overwhelming evil. Over 77 per cent. of our population live in the towns and only 23 per cent. in the country. In the past the country population had been drawn upon to make good the waste of the towns but now there was not a sufficient balance in the country to do that. If we were to have a strong and vigorous race the towns must be made healthy. In the central districts of the city the conditions were such as to make health impossible. He spoke also of the formation of slums now going on in the suburbs and the steady reproduction of all the evils of the congested centres, "because building was not carried out under any well-defined plan drawn up by a central intelligent authority." Other members of the deputation addressed Sir Thomas Shann and Dr. A. Emrys Jones spoke of the danger that the Platt Hall estate might fall into the hands of the jerry builder. Sir Thomas Shann thanked the deputation and dismissed it with a sympathetic, non-committal answer.

THE CHILDREN'S SANATORIUM FOR THE TREATMENT OF PHTHISIS, HOLT, NORFOLK.—As we have already pointed out (*vide* THE LANCET of June 16th, p. 1728), arrangements have been made for the accommodation of 12 children in a temporary home adjoining the site of the Children's Sanatorium at Holt, Norfolk, pending the erection of the permanent building. We are now informed that applicants must be suffering from the early stages of pulmonary tuberculosis and the age limit is—for girls, from two to 16 years of age; and for boys, from

two to ten years. The terms are 25*s.* a week inclusive. Assistance, so far as funds admit, will be given to necessitous children recommended by the Invalid Children's Aid Association, but in all other cases the full cost must be guaranteed before admission. The Invalid Children's Aid Association, 69, Denison House, Vauxhall Bridge-road, Victoria, S.W., will provide for the investigation and medical inspection of all cases and forms can be obtained from the secretary. Meanwhile, in addition to donations for the building fund, the committee appeals earnestly for annual subscriptions to provide for the maintenance of children about to be received. Such donations or subscriptions may be paid to the bankers, Messrs. Hoare and Co., 37, Fleet-street, London, E.C., or to the honorary secretary of the Children's Sanatorium, whose address is 68, Denison House, Vauxhall Bridge-road, Victoria, London, S.W.

DONATIONS AND BEQUESTS.—By the will of the late Dr. James Stewart a sum of over £25,000 is left to the president and council of the University of Melbourne, Victoria, to found and endow in perpetuity three scholarships, each of an annual value of not more than £50, and tenable at the discretion of the president and council for two or three years, to be called the "Stewart Scholarships," one to be awarded for anatomy, one for medicine, and one for surgery.

MEDICAL MAGISTRATE.—Mr. W. Muir Smith, M.B., C.M. Glasg., has been appointed a justice of the peace for Eastbourne.

CENTENARIANS.—Miss Margaret Evans of Pontneath, Glamorganshire, died on July 12th in her 102nd year.—Mr. James Glass died at Graig, Llansadwrn, South Wales, on July 14th. The deceased was a native of Carmarthen, and from the records obtained from St. Peter's Church in that town it was ascertained that he was born on May 1st, 1802.—The death of a native chief, Sigananda, at Nkandhla, in South Africa, is reported. His age was stated to be 104 years.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

Bills Abandoned.

IN the last few days a large number of Bills promoted by private Members have been "dropped," to use the Parliamentary expression. Among these are the following measures: Coroners (Mr. LUKE WHITE); Education of the Blind (Mr. STEADMAN); Juvenile Smoking (Dr. MACNAMARA); Nurses' Registration (Mr. MUNRO FERGUSON); Pharmacy (Mr. WINFREY); Public Health (Sir JAMES WOODHOUSE); Public Health Officers (Sir FRANCIS POWELL); and Abolition of Vivisection (Mr. JOHN JOHNSON).

HOUSE OF COMMONS.

FRIDAY, JULY 20TH.

Defective Eyesight of Children.

Mr. BARNES asked the President of the Board of Education whether the promised amendment to the 35th clause of the Education Bill dealing with medical inspection would include a provision authorising local authorities to provide glasses for such children as were found to be of defective eyesight.—Mr. BIRRELL answered: The amendment which the Government inserted in the clause dealt only with medical inspection, which was made compulsory. The point referred to in the honourable Member's question would therefore not fall within it but would come, if at all, within the remainder of paragraph (b) of Clause 35. On this I have to say that I am not prepared to give a general interpretation beforehand as to the various individual matters which would fall within the powers of a local authority under the term "such arrangements as may be sanctioned by the Board of Education pertaining to the health and physical condition of the children educated in the public elementary schools," since the clause throws upon the Board the duty of giving hereafter such sanction as it may think justified by the circumstances of each individual case.

The Gordon College, Khartoum.

Mr. GEORGE GREENWOOD asked the Secretary of State for Foreign Affairs whether his attention had been called to a series of vivisectional experiments performed on dogs, monkeys, and other animals by Andrew Balfour, M.D., at the Wellcome Research Laboratories, Gordon College, Khartoum; whether the Gordon College was under British control; whether the Wellcome Research Laboratories formed part of such college or what was their connexion with it; how such laboratories were maintained and whether or not by public money; whether vivisectional experiments were habitually performed at the Gordon College; whether the operators were subject to any inspection, regulation, or control; and whether such practice was sanctioned by the British Government or its representative in Egypt.—Sir EDWARD GREY replied: I have no information on the points mentioned in the question but I will make inquiries on the subject. The Gordon College at Khartoum is not under the control of the Foreign Office.

TUESDAY, JULY 24TH.

Central Midwives Board and Irish Midwives.

Mr. HEALY asked the Under Secretary of State for the Colonies whether his attention had been called to the injury resulting to the high reputation in obstetric knowledge enjoyed by qualified Irish midwives through the insertion in colonial official advertisements of the requirement that the new certificate legalised in England for the first time in 1902 was a *sine qua non*; whether he would inquire if pledges were given in the House when the Midwives Act, 1902, was allowed to pass to the effect that the much older Irish qualification would not be prejudiced; and whether he would then inform each colonial Government of the facts, and that after the passing of the Midwives Act the new English Board refused its certificates to qualified Irish midwives unless they came to England and passed fresh examinations, involving more than ten days' absence from home and heavy expense.—Mr. CHURCHILL answered: I fear I have no knowledge of the circumstances referred to in my honourable friend's question. I gather from it that some of the colonies are following a certain rule or practice laid down in England and it seems to me that whatever exception is taken should be to that rule or practice and that the Secretary of State can hardly instruct or advise the colonies not to follow it as long as it exists in this country.

Mr. HEALY asked the Secretary of State for the Home Department whether he was aware that the Midwives Act as at present administered by the Central Midwives Board was being employed as a means of preventing Irish midwives from practising in England, although when the Act was passed Irish representatives were given a distinct guarantee by the promoter that nurses trained in the Irish maternity hospitals would be in no way affected by it; would he inquire whether it was the fact that fully trained and certificated Irish hospital midwives had now to cross over to England and spend ten days in that country in order to pass the qualifying examination of the Central Midwives Board and that but few nurses could spare the time and money to do this; whether the Central Midwives Board had refused to allow examinations to be held in Ireland, though the Irish Midwives Association had guaranteed to defray the expenses of the same; and whether he was aware that colonial authorities were advertising that the English Central Midwives Board's certificate must be possessed by midwives seeking appointments in the colonies, thus excluding women with Irish qualifications.—Mr. GLADSTONE answered: I am not aware that the Central Midwives Board is taking any such action as is suggested in the first part of the question. The Midwives Act, 1902, does not apply to Scotland or Ireland, but my right honourable friend the Lord President of the Council informs me that the Central Midwives Board has never refused to recognise the Irish midwifery qualifications. During the operation of Section 2 of the Act three Irish midwifery qualifications, in addition to the three mentioned in the Act, were recognised by the Board as entitling their holders to claim the benefits of that section. As to the question of the holding of examinations in Ireland, the Central Midwives Board considers it has no power to conduct examinations except at centres in England and Wales, but the Lord President of the Council is taking the opinion of the law officers of the Crown upon the legal point involved. No such advertisements as those to which the honourable Member refers in the last sentence of his question have been brought to my notice.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

DENNING, F. A. V., L.R.C.P. Edin., L.R.C.S. Irel., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Sligo District of the county of Sligo.

ESKELL, L. B., L.D.S., R.C.S.I., has been appointed Honorary Dental Surgeon to the Winsley Sanatorium for the Consumptives of the Counties of Gloucester, Somerset, and Wiltshire, and the City and County of Bristol.

GOODE, CHRISTINA L., M.B., B.S. Melb., has been appointed Assistant Medical Superintendent to the Leytonstone Infirmary.

KERRAWALLA, M. P., M.D. Brux., L.R.C.P. & S. Edin., L.M. & S., has been appointed Assistant House Surgeon to the Hastings, St. Leonards, and East Sussex Hospital.

MOULD, G. T., Major, I.M.S. (retired), has been appointed Refraction Assistant at the Royal London Ophthalmic Hospital (Moorfields Eye Hospital).

NOALL, W. PAYNTER, M.S. Lond., F.R.C.S. Eng., has been appointed Clinical Assistant to the Chelsea Hospital for Women.

PORTER, CHARLES, M.D. Edin., has been appointed Assistant Medical Officer of Health of Leeds.

WALKER, THOMAS WARBURTON, M.B., Ch.B. Vict., has been appointed Medical Officer to the Workhouse by the Tetbury (Gloucestershire) Board of Guardians.

WATSON, GEORGE W., M.D., M.R.C.P. Lond., has been appointed Honorary Demonstrator of Medicine in the University of Leeds.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

BRACEBRIDGE ASYLUM, Lincolnshire.—Senior Assistant Medical Officer, unmarried. Salary £150 per annum, with apartments, board, attendance, and washing.

BRADFORD, ROYAL INFIRMARY.—Medical Officer, unmarried. Salary £100 per annum, with board and residence.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—House Physician, unmarried. Salary £70 per annum, with board and residence.

BRIGHTON THROAT AND EAR HOSPITAL, Church-street, Queen's-road.—Non-resident House Surgeon for six months, renewable. Salary at rate of £75 per annum.

CHORLTON AND MANCHESTER JOINT COLONY FOR EPILEPTICS, Langho, near Blackburn.—Resident Medical Officer. Salary £120 per annum, with board and residence.

COLCHESTER, ESSEX AND COLCHESTER GENERAL HOSPITAL.—House Physician. Salary £80 per annum, with board, residence, and washing. Also House Surgeon. Salary £80 per annum, with board, washing, and residence.

DEVONPORT, ROYAL ALBERT HOSPITAL.—Assistant Resident Medical Officer, unmarried, for six months. Salary at rate of £50 a year, with board and lodging.

EGYPTIAN GOVERNMENT, MINISTRY OF EDUCATION.—Professor of Midwifery and Gynæcology. Salary £400 a year. Also Medical Tutor and Registrar to Kasr-el-Ainy Hospital. Salary £400 a year.

EVELINA HOSPITAL FOR SICK CHILDREN, Southwark Bridge-road, S.E.—Physician to Out-patients.

HOSPITAL FOR EPILEPSY AND PARALYSIS AND OTHER DISEASES OF THE NERVOUS SYSTEM, Maida Vale, W.—Anæsthetist.

LEEDS, HOSPITAL FOR WOMEN AND CHILDREN.—Resident Clinical Assistant for three months.

MONSALL FEVER HOSPITAL, Manchester.—Fourth Medical Assistant. Salary £100 per annum, with board, lodging, and washing.

MOUNT VERNON HOSPITAL FOR CONSUMPTION AND DISEASES OF THE CHEST, Hampstead and Northwood.—Resident Medical Officer. Salary £50 per annum, with board, lodging, &c.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Bethnal Green, E.—Medical Officer in charge of Electrical Department. Salary £50 per annum.

PRESTON ROYAL INFIRMARY.—Senior House Surgeon. Salary £100 per annum, with board, lodging, washing, &c.

QUEEN CHARLOTTE'S LYING-IN HOSPITAL, Marylebone-road, N.W.—Physician to Out-patients.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for four weeks.

SHEFFIELD UNION HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with apartments, rations, and allowances.

SHERBURN (ANCIENT) HOSPITAL, near Durham.—Medical Officer. Salary £300, with house, coals, &c.

STOCKPORT INFIRMARY.—Junior Assistant House Surgeon for six months. Salary at rate of £40 per annum, with board, washing, and residence.

SUNDERLAND INFIRMARY.—Two House Surgeons. Salary £80 per annum, with board, residence, and washing.

WEST BROMWICH DISTRICT HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board, residence, and washing.

WESTON-SUPER-MARE HOSPITAL.—House Surgeon, unmarried. Salary £100 per annum, with board and residence.

WISBECH, NORTH CAMBRIDGESHIRE HOSPITAL.—Resident Medical Officer.

WOLVERHAMPTON AND STAFFORDSHIRE GENERAL HOSPITAL.—Assistant House Surgeon, for six months. Honorarium at rate of £75 per annum, with board, lodging, and washing.

Births, Marriages, and Deaths.

BIRTH.

CARTER.—At Ingledean, Ilakeard, the wife of W. H. St. Leger Carter, L.R.C.P., L.R.C.S.E., of a son.

MARRIAGES.

DALZIEL—WILSON.—On July 21st, at the parish church, Forest Row, Captain R. M. Dalziel, I.M.S., to Euphemia Beattie (Effie), only daughter of Arthur Ross Wilson, Esq., Almora, India.

HUFF-HEWITT—HANNAH.—On July 18th, by licence, at the parish church, Ashton-in-Makerfield, by the Rev. W. Williams, rector of Holy Trinity, assisted by the Rev. F. Kennen, curate-in-charge St. Luke's, William R. Huff-Hewitt, M.B., Ch.B., Rhôs-on-Sea, youngest son of the late Rev. W. J. Hewitt, to Maud Elizabeth, second daughter of Nathan Hannah, L.R.C.P. Edin., M.O.H., &c., of Rock House, Ashton-in-Makerfield. "At home" Sept. 12th and 13th.

MILLAR—GRAHAM.—At Durban, South Africa, on the 16th June, James Grant Millar, M.B., Ch.B., youngest son of the Rev. David Millar, D.D., of St. John's, Glasgow, to Mary Lang, second daughter of the late Andrew Lang Graham and Mrs. Graham, 12, Park-circus, Glasgow.

DEATHS.

DUCAT.—On July 23rd, at Grosvenor-road, Highbury, N., Andrew David Ducat, M.D. Edin., L.R.C.S. Edin., aged 67.

MARGERISON.—On July 20th, at the Friary, Winchester, Richard Margerison, B.A., F.R.C.S., aged 54.

NOBLE SMITH.—On July 20th, at Queen Anne-street, Cavendish-square, Noble Smith, F.R.C.S. Edin., in his 60th year.

WING.—On July 18th, at Wellington, New Zealand, Charles Edward Wing, L.R.C.P., M.R.C.S., younger son of the late Henry Wing, surgeon, Bury St. Edmunds.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE HUMOURS OF COUNTRY PRACTICE.

"THE art of medicine, like most other things, has its humorous side, and the following extracts from the notes of 18 years' country practice may amuse your readers. It is well that the lighter side of work which must often be so sombre should now and then be viewed. Each extract is absolutely authentic and none is 'touched up' in any way." Thus writes an esteemed correspondent in preface to the following amusing notes of his daily life:—

To begin with an artless consultation in the surgery. Enter two small children, the elder of whom, aged about six years, produces a flat pint bottle, of the sort in which the best pale brandy is dispensed to the public, and says, "Please, some medicine for the baiby." "Well, what's the matter with it?" "Please, its got a bad backside." I wonder how Sir William Broadbent or Sir Richard Douglas Powell, or any other of our revered leaders, would deal with a medical emergency such as this? Would they be more competent than the humble G.P.? Small wonder, by-the-bye, that Sherlock Holmes was evolved by a medical man; there is a deal of deduction goes on in a country surgery.

Then comes a recollection of a cadaverous individual who walks in and with sepulchral tone says, "Good afternoon, sir, I've come to tell you about my stomach, sir. Last Friday it come right up into my throat." What a case for Messrs. Moynihan, Mayo, Ward, and Littlewood! This is one of the patients who seeks to impress you by vivid description of his symptoms. How well we all know him, and how very graphic he can be. Here are some similar efforts enlivening my notebook: "I coughed last night till a lump come in my lunk [groin] and my eyes they struck fire." "When I was eleven year old I 'ad the dynasty; I 'ad the dynasty 'n I 'ad the small-pox, one arter the other." "The itching and aching in my legs, oh, it's somethin' *chronic*; it makes my eyes strike fire every time my stockins is pulled on (or off)."

Many patients are excessively genteel in talking of matters medical. One good lady, describing a common digestive disturbance, said in a tone of indescribable refinement, "I fancy, Doctor, that a *cold* was the instigation of it." On another occasion the same lady assured me that she "never was in such a dialeema." Of the same category is the gentleman who approached me delicately with, "I wish to solicit your custom, sir, for my wife in her confinement."

Among odds and ends I find the following. A small girl of about seven, who says mysteriously, "Please, sir, pappa says he's very *cautiously* in his bowels." Wise man, that. A man, in reply to the inevitable, "How do your bowels act?" replied, "Well, sir, not very gay, sir." (This I have heard so frequently since I first noted it that it has ceased to amuse me and the same is true of the reply: "I'm always rather caustic," which is an almost daily commonplace.) Finally, a virtuous lady, discussing a delinquent neighbour, said: "I don't 'old with such drunkenness and immortality."

Written communications have often relieved the burden of the day's work and as *literæ scriptæ manent* I inclose the originals of all those given below. To begin with a typical one:—"Doctor ——. Sir, I write to inform you that Mrs. B. is very ill, she as a very Bad cold, and cough, her inside seems very week indeed, my water is bad and high colour. I remain, your's triy, Mrs. B."

Here is another sample: "Please, sir, will you be kind enough to try and send Missis R. something to ease her cough and her breath the wind creates round her stomach and she cant get anything to move it at all and it makes her that she cant get about at all, and she will be much oblised if you will do so." That fine expression, "the wind creates round her stomach," has become a classic in our family circle.

Again: "Dear Sir, I write to tell you that Mrs. S. is suffering with pains, it begun in the hipe and as made its way into the back and about following with sickness with flutering in the art and unable to eat and drink. I am, etc., on behalf of Mrs. S., John S."

The following gives the most elaborate rendering of that awkward word diarrhœa. The variations run in this part of the country, from "diahorria," through "direar" and "diare," to the simple form "dyre." "Dear Sir, The Medicen you sent have stopped the diahorria but I feal very low and weak and I have a pain in my side just to the right of the nable and my nable his larger than it ought to be, yours truly, W. P."

The writer of the following has ingeniously avoided the diarrhœa difficulty:—"Sir, I want you to please to send me some medicine. I have a violent pain in my bowels with pergin, please to send me something to ease the pain."

The genteel letter-writer, of course, flourishes. "Will Dr. —— please note his services will be required as usual at Mrs. H.'s approaching confinement. The event is expected in March, and oblige." And in the following year a postscript:—"And please note that Mrs. H. will require Dr. ——'s services early in September for confinement purposes, as before." And, finally:—"Will Dr. —— kindly lend Mrs. G. the Enerve, as Nurse O. wants to give an ejection."

THE EBBW VALE WORKMEN'S DOCTORS' FUND.

THE relations between the working men of Ebbw Vale and the medical officers attending them have reached an acute stage. The workmen's committee has given its medical officers three months' notice to terminate their engagements, and it is stated that steps are to be taken to fill the vacancies thus formed. The anger of the workmen seems to have been aroused chiefly by a letter which appeared in THE LANCET, Dec. 23rd, 1905, p. 1877. This letter, which was from Mr. H. S. Elworthy, one of the medical officers in question, dealt at length and in general terms with the evils arising from the contract system of medical attendance. Ebbw Vale was not mentioned, nor, indeed, was any other locality, and with the statements therein contained we are mainly in agreement. The workers of Ebbw Vale, forgetting the old saw, "If the cap fits put it on," applied Mr. Elworthy's strictures to themselves and accordingly a meeting was arranged and was recently held at which Mr. Elworthy consented to meet the workmen of Ebbw Vale and to discuss the statements contained in his letter. He received a fair hearing but he was much heckled, and Mr. Richards, M.P. for West Monmouthshire, had the bad taste to characterise Mr. Elworthy's statements as "lies, lies, lies." Mr. Richards also made rude remarks as to Mr. Elworthy's conduct in receiving a salary from the Ebbw Vale Colliery Company. Mr. Richards also said "that they would never submit to the British Medical Association" and it was finally decided to publish Mr. Elworthy's name as "the offending doctor." Mr. Elworthy allowed that he might have exaggerated when he said that "patients were in the main highly paid workmen" and that he should have said "in too many cases" instead of "in the main." The rest of his remarks he considered to be substantially correct and he refused to withdraw his statements, as the meeting demanded that he should do.

We consider that Mr. Elworthy is perfectly in the right. He made general statements which are generally true. Ebbw Vale was not mentioned but we make no doubt that the conditions of contract medical practice there are just as bad as anywhere else, and how bad that is those of our readers who remember "The Battle of the Clubs" will have no difficulty in recalling. It has been decided by the Trades and Labour Council of Ebbw Vale to hold a meeting on July 28th at which the subject of the letter will come up.

A QUESTION OF PROFESSIONAL BEHAVIOUR.

To the Editors of THE LANCET.

SIRS,—Recently a patient of mine met with an accident. He went to a neighbouring hospital and was attended by a surgeon on the staff of that hospital, who arranged to see him the next day at his (the surgeon's) own house. He continued to attend him until he was well. Is it in accordance with medical etiquette and gentlemanly conduct for a surgeon to do this, when he knew that the patient had a medical man who was in the habit of attending him? I think the question most important, as it is not the first time that a similar thing has occurred within my own knowledge, and it does not seem to me consistent with the best traditions of our profession.

I am, Sirs, yours faithfully,

July 21st, 1906. INQUIRER.

*** "Inquirer" must know that he has described a bad breach of professional manners.—ED. L.

CIRCUMCISION IN ETHNOGRAPHY.

WE have received a little pamphlet containing a paper upon the ethnography of circumcision, reprinted from the *New York Medical Record* of June 9th. The author of the paper is Dr. John Knott of Dublin who is well known as a writer upon various antiquarian subjects in medicine. The paper is, as Dr. Knott himself terms it, a somewhat "crude panoramic sketch" but for all that it contains materials for a much fuller work on the subject. Circumcision is a custom which is of wide interest to anthropologists. It, or variants of it, such as the arilthakuma of the Central Australian tribes, which, by the way, Dr. Knott does not mention, is a custom found all over the world. The Jewish race, as is well known, regarded the rite as something peculiar to themselves and as marking them off from other nations, and as a matter of fact it did mark them off from most of the known nations of the old world except the Egyptians. So much so was this the case that the writer of the Maccabees complains bitterly that the advanced Jews of the time of that book were so anxious not to appear too national that they made themselves prepuces (*ἀκροβυστίας*). Unfortunately, he has left no record of how this interesting prosthesis was carried out. Circumcision in boys and the analogous rite in girls have been performed among nations other than the Jews at puberty and marked the change from the infant, in the legal sense, to the full-grown man or woman. Among the Jews it is, of course, performed upon the eighth day after birth and the Biblical account of its institution makes it a distinctly dedicatory operation. Among other nations the rite was connected not only with puberty but also by an easy transition with the fertility of crops. But the folk-lore of crops, vegetation gods, fertility and generation, initiation ceremonies, and the concurrent matters of menstruation, tests of virginity, and the like is a very wide subject upon which volumes have been, and might continue to be, written. Dr. Knott's little paper is a useful collection of notes for those who may wish to pursue the subject further.

RATHER AMBIGUOUS.

THE following advertisement appearing in an excellent gazette for medical students is not happily worded.

FOR SALE.—Ashby & Wright's Diseases of Children, in good condition; 12*s.*—Apply Editor.

THE CAUSE OF POISONING BY HAWTHORN BUDS AND CERTAIN OTHER PLANTS.

A CORRESPONDENT of the *Chemist and Druggist* of June 9th ascribes the poisonous properties of hawthorn buds to an abundance of crystals of calcium oxalate, the presence of which he has identified by a microscopical examination. The buds are commonly known in various parts of England as "bread and cheese" and are frequently eaten by children. The dangerous nature of the custom has recently been emphasised by the death of a girl at Penrith. A further examination of the leaves at a later stage showed that the crystals had disappeared. It is curious to note that in some other plants—e.g., rhubarb—the acidity of the young plants is not due to oxalic acid but probably to malic, citric, and tartaric acids; the oxalic acid appears at a later stage. That oxalic acid is the cause of poisoning by hawthorn buds receives support from the following case. A farmer in the Midlands having lost a number of cattle suspected that death was caused by plants with an unusual leaf which were growing on the grazing ground. Specimens of the plants were submitted to a botanist who recognised them as belonging to a species of *Dipsacus*. A chemical examination of the leaves revealed the presence of an abundance of oxalates. A fatal case of poisoning occurred recently at King's Heath through a child eating dandelion flower buds and a careful examination of the field revealed no trace of any plants known to contain oxalic acid. It is probable that in this case also oxalates were present in the flower buds.

HOLIDAYS FOR POOR CHILDREN.

THE Rev. J. W. Atkinson of "Claremont," Cowley-road, London, N.E., sends us an appeal on behalf of East-end slum children to whom a day in the country means so much. The East London Mission, of which our correspondent is the president, informs us that the entire cost of giving a day's holiday in the country to each poor slum child, including a substantial meal, is 1*s.* per head, and even this small sum will be thankfully received by the committee of the mission. Probably there is little to be gained from a physiological point of view by one day's outing in the country but the ray of sunshine which it brings into the sordid lives of the children of our slums has a valuable mental effect.

AUGUST BANK HOLIDAY ON THE CONTINENT.

THE Great Eastern Railway Company announces that tickets at reduced fares available for eight days will be issued to Brussels from August 1st to 4th inclusive and August 6th, and to Zürich, *viâ* Harwich and Antwerp. Dining and breakfast cars are run between London and Parkeston Quay, Harwich, on the Antwerp service, and passengers leaving London in the evening reach Brussels next morning after a comfortable night's rest on board the steamer. For visiting The Hague, Scheveningen, and Amsterdam special facilities are offered *viâ* the Company's Royal British Mail Harwich-Hook of Holland route. A corridor train with vestibuled carriages, dining and breakfast cars is to be run on the Hook of Holland service between London and Harwich. From the Hook of Holland through carriages and restaurant cars are run in the North and South German express trains to Cologne, Basle, and Berlin, reaching Cologne at noon and Basle and Berlin in the evening. For the convenience of passengers tickets dated in advance can be obtained at the Liverpool-street Station Continental Enquiry and Booking Offices. The Danish Royal Mail steamers of the Forenede line of Copenhagen will leave Harwich for Esbjerg (on the west coast of Denmark) on August 2nd and 4th, returning on August 7th and 8th. The General Steam Navigation Company's steamers will leave Harwich on August 1st and 4th for Hamburg, returning on August 5th and 8th.

ERRATA.—Dr. James Fletcher, some remarks by whom are reported in THE LANCET of July 21st, p. 180, is resident medical officer of the Ham Green Fever Hospital, Bristol, and does not (as inadvertently stated in the report) represent the Metropolitan Asylums Board. —In the analysis given of "Invalid Port," on p. 1838, in THE LANCET of June 30th, the figures for alcohol when corrected for temperature should read: alcohol by weight 18·08 per cent., by volume 22·16 per cent., equal to proof spirit 38·87 per cent.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Eastbourne Chronicle, Glasgow News, Manchester Courier, Manchester Guardian, Birmingham Post, Daily Express, Bristol Mercury, Bradford Telegraph, Dublin Independent, Leeds Post, Sheffield Independent, Daily Mail, Leicester Post, Sheffield Telegraph, Westminster Gazette, Cardiff Mail, Globe, Leeds and Yorkshire Mercury, Bradford Observer, Freeman's Journal, Devon Gazette, Darlington Echo, Northampton Reporter, Dublin Times, Hull Mail, Belfast Whig*, &c.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, July 26th, 1906.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind	Rainfall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks
July 20	29·88	W.	...	121	69	54	54	59	Cloudy
,, 21	29·98	S.W.	...	95	67	53	54	59	Cloudy
,, 22	29·98	W.	0·02	173	80	59	61	66	Cloudy
,, 23	29·98	S.W.	...	135	81	59	67	71	Overcast
,, 24	29·97	N.W.	...	126	74	62	57	64	Cloudy
,, 25	30·16	E.	...	116	75	57	56	63	Fine
,, 26	29·96	E.	...	119	73	58	59	65	Fine

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (30th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (3 P.M.).

TUESDAY (31st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.).

WEDNESDAY (1st).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.).

THURSDAY (2nd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.).

FRIDAY (3rd).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), St. Mark's (2.30 P.M.).

SATURDAY (4th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (30th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations. Mr. Dunn: Diseases of the Eye.

TUESDAY (31st).—POST-GRADUATE COLLEGE (West London Hospital Hammersmith-road, W.).—10.30 A.M.: Dr. Moullin: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: X Rays. Operations. Dr. Abraham: Diseases of the Skin.

WEDNESDAY (1st).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. Dr. Saunders: Diseases of Children. 2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations. CENTRAL LONDON THROAT AND EAR HOSPITAL (Gray's Inn-road, W.C.).—5 P.M.: Demonstration:—Mr. Stuart Low: Ear.

THURSDAY (2nd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations. Mr. Dunn: Diseases of the Eye.

FRIDAY (3rd).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10.30 A.M.: Dr. Moullin: Gynæcological Operations. 2 P.M.: Medical and Surgical Clinics. 2.15 P.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. 2.30 P.M.: X Rays. Operations. Dr. Abraham: Diseases of the Skin.

SATURDAY (4th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Dr. Ball: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations.

EDITORIAL NOTICES.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1906, which was completed with the issue of June 30th, and the Title-page to the Volume, were given in THE LANCET of July 7th.

VOLUMES AND CASES.

VOLUMES for the first half of the year 1906 are now ready. Bound in cloth, gilt lettered, price 18*s.*, carriage extra.

Cases for binding the half-year's numbers are also ready. Cloth, gilt lettered, price 2*s.*, by post 2*s.* 3*d.*

To be obtained on application to the Manager, accompanied by remittance.

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SUBSCRIBERS ABROAD ARE PARTICULARLY REQUESTED TO NOTE THE RATES OF SUBSCRIPTIONS GIVEN ABOVE. It has come to the knowledge of the Manager that in some cases higher rates are being charged, on the plea that the heavy weight of THE LANCET necessitates additional postage above the ordinary rate allowed for in the terms of subscriptions. Any demand for increased rates, on this or on any other ground, should be resisted. The Proprietors of THE LANCET have for many years paid, and continue to pay, the whole of the heavy cost of postage on overweight foreign issues; and Agents are authorised to collect, and generally do so collect, from the Proprietors the cost of such extra postage.

Communications, Letters, &c., have been received from—

A.—Messrs. Allen and Hanburys, Lond.; Ammonal Chemical Co., New York; A. J. S. C., Apothecaries' Society, Secretary of; Messrs. Adlard and Son, Lond.; Mr. J. W. Atkinson, Lond.; Dr. B. Addenbrooke, Kidderminster; Mr. L. R. Acomb, Lond.; Dr. F. W. Alexander, Lond.

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